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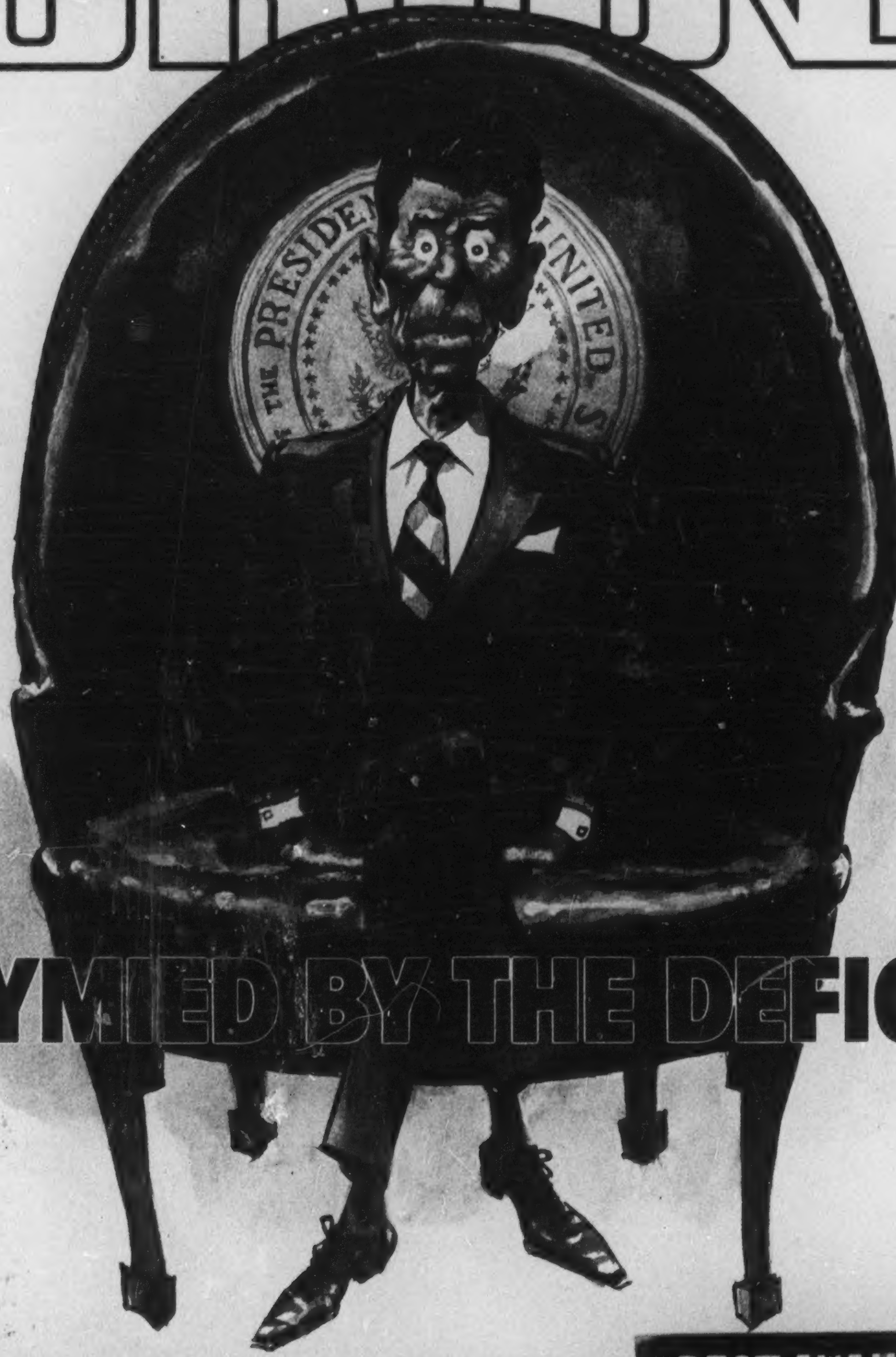
How Far Will Car Sales Rebound?
The Widening War in Video Games
Creative Accounting at Aetna

$3.00 November 15, 1982

FORTUNE



STYMIED BY THE DEFICIT

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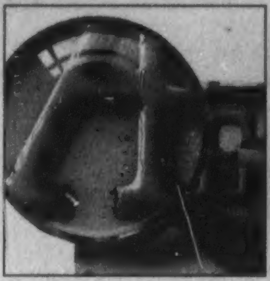
FORTUNE

Ronald Reagan is staring at annual budget deficits that are approaching $200 billion —and paralyzing policy. The cover illustration is by Bruce Stark; an analysis of Reagan's dilemma is on page 50.



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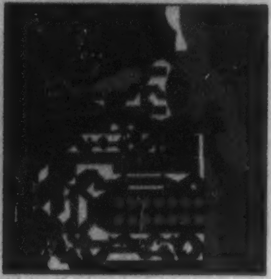
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BOYCOTTS

PUSH Collides with Busch

by IRWIN ROSS

To listen to Jesse Jackson, the flamboyant black preacher who has become a scourge to American business, is to enter a world of oddly distorted contours and imagery. In his view, "Black America is an underdeveloped nation *within* a developed nation." He sees his brethren as exploited by the "colonialism" of white corporate America, run by an "oppressive ruling caste" that denies the black nation "its right to self-determination." In full rhetorical flood, Jackson has even declared that "we are under military occupation—by military forces that are alien to the interests of our community." He means white police departments.

Unlike the black power extremists of the 1960s whose words were similar, Jackson is not calling for a rebellion to overturn the system. Instead he wants black people to share in its rewards. He seeks "trade agreements" from corporations that sell to black consumers. In exchange for their patronage, says Jackson, the companies must employ more blacks at all levels and sign up more black franchisees, wholesalers, and vendors, place more deposits in black banks, and retain more black lawyers, ad agencies, and insurance companies.

Companies that refuse to sign face the threat of a boycott. Heublein and Seven-Up, a subsidiary of Philip Morris, have negotiated trade agreements with the self-appointed but very popular ambassador from the black community, and

Photographs by Nubar Alexanian

After some easy victories elsewhere, Jesse Jackson has apparently met his match in the brewer of Budweiser.

Coca-Cola too has acknowledged him, although it did so somewhat reluctantly.

But this past summer Jackson ran into a stone wall. He asked Anheuser-Busch to sign an agreement, and the nation's largest brewery refused. The company, which had already started to expand opportunities for blacks on its own several years ago, saw no reason to make a compact with him. Jackson came to believe that the company was trying to discredit him. Emboldened by a U.S. Supreme Court decision over the summer that clearly makes boycotts legal, in early September he announced a boycott. "Bud is a dud," he proclaimed and urged black store and tavern owners not to sell Budweiser, Michelob, Busch, Natural Light, and the four other Anheuser-Busch beers.

Spasm of modesty

The company insists that the campaign has had no effect on sales. Jackson says it is slowly gathering support. "Time is on our side," he argues. "After the first month of the Montgomery bus boycott in the mid-1950s, the bus company said the boycott had no effect. But they couldn't say that after a year." Moreover, Jackson's continued verbal assaults—in speeches and on radio and television interviews—pose a long-term danger to Anheuser-Busch. If the notion, however unfair, gains currency that the company is bigoted, that stain could remain long after the present confrontation is forgotten.

The vehicle for Jackson's campaign is Operation PUSH, an acronym for what was at first a typical piece of Jacksonian hyperbole—People United to Save Humanity. Four years ago, in a spasm of modesty, the board of directors modified the name to People United to *Serve* Humanity. Although it has several luminaries as board members, including the chairman, Mayor Richard Hatcher of Gary, Indiana, the organization is the enlarged shadow of Jackson, its national president. He oversees a Chicago staff of about 45 and a Washington outpost of half a dozen, operating on an annual budget of $1.5 million, according to Jackson. PUSH does not have any financial statements for inspection. On the other hand, there is nothing to suggest that Jackson has profited personally from PUSH. He draws a middling salary of $39,000 a year and earns a few thousand more from lectures. With his wife and five children he lives in a house on Chicago's South Side that he bought 12 years ago for $42,000. The organization is financed by gifts from black businessmen, contributions by churchgoers, and the proceeds from concerts, radio appeals, and house parties; white business firms, seeking to ingratiate themselves with the black community, also contribute.

The troops who go door to door and pass out leaflets for PUSH's campaigns are mobilized mostly by the churches, still the most important institution in the black community. Much of Jackson's strength comes from his ability to inspire other black ministers to follow him, even to the point of imitating his rhetoric. Jackson says he can count for support on churches in about 60 cities; some of his detractors in the black community claim that number is inflated.

Jackson grew up in a deeply religious family in Greenville, South Carolina, where his father supervised janitors in the post office. At North Carolina A&T he played quarterback on the football team and narrowly opted for the ministry over a legal career. He has been a civil rights activist since his youth and in 1965 as a young seminarian he joined Martin Luther King's Southern Christian Leadership Conference. A year later King put him in charge of Operation Breadbasket, SCLC's economic arm, and within a few years Jackson's oratory and organizational skills won him an enthusiastic following. Jackson pressured retail chains in Chicago to stock products made by black manufacturers, to use black service companies, and to deposit money in black banks. Companies that resisted were picketed. But in 1971 Jackson had a falling out with SCLC, which felt he was growing too independent and suspended him for 60 days. He promptly quit and founded PUSH.

SCLC still campaigns for black economic opportunity and has a drive that parallels Jackson's. It has come to an understanding with Food Giant Inc., a chain of 91 supermarkets in Alabama and Georgia, to hire more black store managers, promote more blacks at all levels, and use more black suppliers. It is now trying to negotiate a comparable arrangement with the mammoth Winn-Dixie chain, which has 1,228 stores. Similarly, the National Association for the Advancement of Colored People has been prodding the movie industry to employ more blacks both in front of and behind the camera; it has an agreement with Walt Disney Productions and says it is close to an understanding with at least one other major studio.

Boycott the tube

But it is Jackson who has commanded public attention, largely because of his style. Now 41, he is a dramatic platform presence, tall and athletically built with an erect bearing and a rousing voice.

In recent years Jackson has emerged as "the best-known black leader in America," in the words of Benjamin L. Hooks, the executive director of the NAACP. "There's nobody who approaches him. And if I say that, you can believe it's true. Because ego would demand that I say it about myself." Jackson's ascendancy is partly the result of his oratorical skills, his well-publicized exploits in Chicago, and the media attention that he received in the late 1970s for his "PUSH-Excel" program, in the course of which he barnstormed high schools around the country to motivate youngsters. Among other things he persuaded many to pledge they would give up two hours of television a night for homework.

Jackson's preeminence also reflects the shortage of effective competition. Hooks, 57, a lawyer and former FCC commissioner, is intelligent and deliberate, but lacks Jackson's ability to dramatize issues or himself; he is not necessarily recognized on the street, as Jackson is. John Jacob, president of the National Urban League, has been in a top post for less than a year, too short a period to have made an impres-

Research associate: Jaclyn Fierman

To publicize Jackson's boycott of Anheuser-Busch, the owner of a liquor store on Chicago's South Side was delighted to donate a few cases of Bud for sidewalk disposal. The crowd seemed to enjoy dumping it as much as drinking it.

sion. He took over from Vernon Jordan, now practicing law in Washington. Jacob exudes quiet competence but lacks Jordan's incandescence. Reverend Joseph Lowery, who heads SCLC, is well regarded within the civil rights movement but little known outside it. SCLC has never recaptured the national prominence it had under King.

The present drive to exact concessions from business results largely from blacks' frustration with the Reagan Administration, which has reduced funding levels for the social programs favored by black groups. PUSH-Excel no longer receives federal subsidies, which amounted to $4.5 million from 1978 through 1981.

Investment's novel meaning

Even in the midst of a recession, black leaders consider the private sector more promising than government. What Jackson wants from business, he says, borrowing a Third World phrase, is "trade not aid." He describes the goal of the current campaign variously as "proportional representation," "fair share," or "parity." For example, Kentucky Fried Chicken, a subsidiary of Heublein, sells 20% of its products to blacks. Therefore, in Jackson's view, blacks ought to constitute 20% of its franchisees, 20% of its suppliers, 20% of its lawyers, 20% of its employees in all major categories; and 20% of its ad budget should be placed in the black media.

For all his sloganeering, Jackson is a pragmatist who realizes that he cannot attain such vaulting goals all at once. He is willing to settle for less initially. But he is inflexible about the basic goal—a flowback in "trade" to blacks proportional to "our investment." He gives the term investment a novel meaning, making it a synonym for consumer spending.

However preposterous the notion of ethnic quotas governing all aspects of corporate life, few would dispute that blacks are today meagerly represented in many business pursuits and should participate in greater numbers. The Heublein agreement, although far short of parity, ought to help blacks do that. Over five years the Heublein covenant provides more than $180 million in economic benefits to the black community. Among the components: $75 million in purchases from black vendors, $60 million in loans from black banks, $25 million in advertising placed with black agencies. Those numbers represent substantial increases from the levels prevailing before the covenant was signed last March, although the numbers are relatively small compared with Heublein's total budget. At its current rate of expenditure, Heublein will spend a total of $3.4 billion for goods and services over the next five years.

Heublein has also pledged to create a $10-million fund to provide lease guarantees enabling black merchants to open 24 Kentucky Fried Chicken stores over the next three years. The company will also offer 88 additional KFC franchises to blacks qualified to become owner-operators. By the most recent count only 14 of 4,421 Kentucky Fried Chicken stores were owned by blacks.

Justice and market share

Heublein went along with Jackson not only in the interest of justice but also because it considered a covenant a good marketing device to attract more black customers. Says Chairman Hicks Waldron: "When you see a black go into a chicken store, you see on average a person who will eat twice as much chicken as a white person. We sell a high percentage of Smirnoff to blacks as well. Blacks are also good consumers of Harveys Bristol Cream Sherry." Heublein was eager to increase its commitment in all areas of interest to blacks; it was also eager to publicize its

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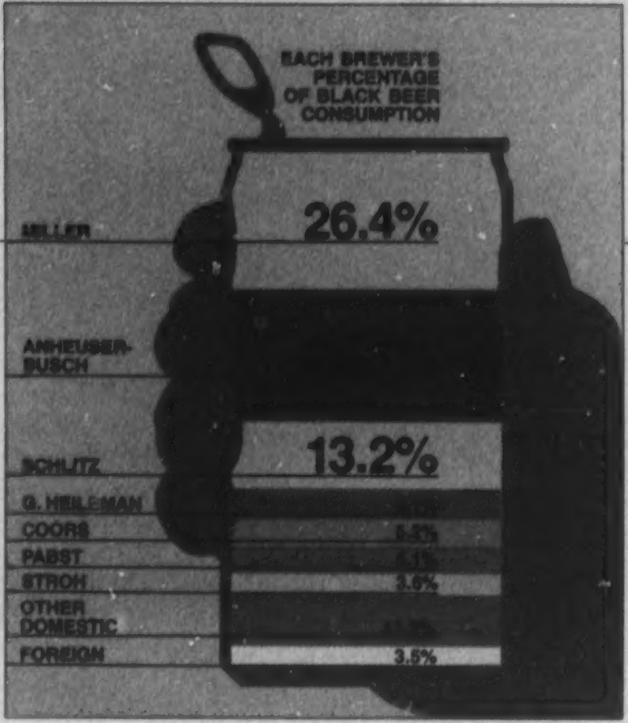

Source: R.S. Weinberg & Associates

What Blacks Mean to Brewers

Although a quarter of the black beer-drinking population buys Anheuser-Busch's products, those customers constitute only about 10% of the company's total sales. The black consumer is more important to Miller, which sells nearly 15% of its beer to blacks, and to Schlitz, about 20%.

good works in the black media. Cooperation with Jackson was "good business," says Waldron, who jokes, "We would practically kill for one point of market share."

Seven-Up signed an agreement for much the same reason as Heublein. Ever since the company was bought by Philip Morris four years ago, it has been eager to expand its appeal to blacks. Seven-Up sees its covenant with PUSH—a $61-million package over five years—"as a marketing opportunity," according to Guy L. Smith IV, vice president for corporate affairs. Setting blacks up as wholesalers is "a way for us to be socially responsible and at the same time sell soft drinks."

Coca-Cola did not welcome Jackson's initiative when it came in late 1980, but agreed nonetheless to talk to him. The conversations dragged on amiably for months, but after a series of misunderstandings, Jackson suddenly announced at the PUSH convention in Chicago a "withdrawal of enthusiasm" for Coke's drinks. Jackson used that euphemism in place of boycott because boycotts were still under a legal cloud. The slogan of the day was direct enough, however: "Don't choke on Coke." Two weeks later the parties met in Washington and produced an agreement.

Busch's pride

It was presented with considerable fanfare at a press conference in Atlanta in August 1981, with Jackson, Coca-Cola President Donald R. Keough, and several black luminaries on hand. Oddly, there was no signed document, as in the case of Heublein and Seven-Up, but the omission was not publicized and the occasion was widely regarded as a triumph for Jackson. Coca-Cola sustained a spate of criticism for caving in supinely to PUSH. The company argues, however, that the boycott had no impact and that its new program was only a continuation of programs under way for some time. Since then it has increased the number of black "fountain wholesalers"—the merchants who supply the beverage syrup to retailers—from two to 26 and increased its billings with black ad agencies.

Anheuser-Busch seemed a likely signatory to a Jackson trade agreement. Only Miller has a larger following among blacks who drink beer (see chart), and Jackson had signed an agreement with Miller and Schlitz almost a decade earlier. What he hadn't counted on was the St. Louis brewer's justifiable pride in its own program. Black consumers make up only about 10% of Anheuser-Busch's total market. Some 18% of its 14,000 employees are minority members—a category that includes Hispanics as well as blacks—with the percentages of officers and managers a respectable 9.6%; professionals, 7.79%; and technicians, 17.5%. Its deposits and lines of credit at minority banks total $10 million. It buys $18 million of goods and services a year from minority suppliers and places $7 million of advertising in minority media.

Those figures compare favorably with the goals of the companies with which PUSH has covenants.

It also has two black board members, Wayman F. Smith III, a vice president whose principal responsibility is minority affairs, and an outsider, Sybil Mobley, dean of the School of Business and Industry at Florida A&M University. One area in which minority participation has been low is in the number of franchisees who distribute Anheuser-Busch beer: only one black and three Hispanics out of nearly 950. So the company plans to spend $5 million to provide loans and loan guarantees for black entrepreneurs who want to buy distributorships.

Anheuser-Busch refused to be PUSHed. Chairman August Busch III declined to meet with Jackson, delegating Wayman Smith to talk to him. Jackson and Smith met several times. As far as Smith was concerned, the company already had an excellent program and saw no reason "to fit it into Jesse's format." Jackson was displeased because Smith would not give him a breakdown that distinguished between the number of blacks in some parts of the program and the number of Hispanics. Smith says he let Jackson look at the data, but not keep copies. Jackson, who regards easy access to the white leadership of a company as crucial, also resented the fact that he could not talk directly to Busch. Last May a meeting between Busch and Jackson was finally arranged in Smith's office. It lasted half an hour, according to Smith's account; ten or 15 minutes, according to Jackson's. Jackson calls it "not a meeting" but "a courtesy call—like an audience with the Pope."

Despite the quarrel with Jackson, Smith attended the PUSH convention in July and delivered a speech. Jackson insists that the speech had not been sched-

continued

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Richard Faverty

August A. Busch III, 45, the company's chief executive, believes that boycotts are sometimes justified, but not against a company that gives as many opportunities to blacks as Anheuser-Busch does.

uled and that Smith expanded a two-minute greeting at a luncheon into a full-blown address. Smith disputes Jackson, pointing out that his company subsidized the lunch to the tune of $5,000 and that there was a firm understanding that he would speak at length. Jackson later returned the $5,000.

An offending couplet

Tempers might have cooled if it had not been for editorials in black newspapers in St. Louis attacking Jackson on a separate matter. In August Jackson had appeared before a group of black businessmen in St. Louis and promoted a PUSH subsidiary called the International Trade Bureau, an organization of black companies that would like to do business with, among others, the white corporations that have signed compacts with PUSH. Members pay a $500 admission fee. "If you want to play, you have to pay," Jackson told the group. The couplet, a classic Jacksonian flourish, offended some in the audience. An editorial in the *Sentinel*, a black weekly, was particularly sharp in accusing Jackson of being "self-serving and defrauding the black community." Jackson filed a $3-million libel suit against the *Sentinel*. He does not deny making the remark, but claims it was misinterpreted, that he was merely suggesting that a good cause had to be supported if it was to succeed.

Soon afterward Jackson concluded that the editorial attack had been "organized and orchestrated" by Anheuser-Busch. He had no evidence, only a flimsy suspicion: the *St. Louis Post-Dispatch* had been tipped off that the editorials were about to appear and reprints were sent around the country. Somebody was out to embarrass him, Jackson reasoned. Anheuser-Busch seemed the likely instigator. The company denies the charge.

Jackson angrily decided that his integrity and that of PUSH were at stake. He called for a boycott. In St. Louis it has had negligible effect. The company has considerable support among blacks because of both its employment record and its local benefactions. "They've been fantastic corporate citizens," says William Douthit, president of the St. Louis Urban League, which is emphatically not supporting PUSH in this fight.

Search for a compromise

The boycott has been slow in getting under way elsewhere. According to PUSH, its activists in Washington, Chicago, and seven other cities have been touring stores in black neighborhoods to talk Anheuser-Busch products off the shelves. Some store owners have complied, though not in all nine cities. Some students on black campuses are supporting the boycott as well.

The two sides have started to talk to one another again and may work out a compromise. If the fight goes on for just a short time, Jackson is not likely to hurt Anheuser-Busch much. Many local boycotts have succeeded over the years, for it is relatively easy to organize a single community against injustice. The Montgomery bus boycott, protesting the segregation that forced black people to the back of the bus, is a good example. A national boycott, however, is much harder to sustain, especially when the cause is dubious.

But there is a danger for Anheuser-Busch in the longer term. If the company gets into a protracted battle with Jesse Jackson, given his ability to command public attention, sooner or later not only the black community but much of the white community as well may be left with the vague but lingering impression that Anheuser-Busch is somehow unfair. Jackson too runs a serious risk. If the company sits him out and is perceived as having been unjustly attacked, the threat of a Jackson boycott will lose much of its potency. So may Jackson's reputation. ■

Jim Woodruff, president of the National Association of Minority Automobile Dealers, leads a discussion at PUSH headquarters on the special problems of black car dealers, as part of a two-day conference on blacks in the car business. Fewer than 100 of the 25,200 auto dealers in the U.S. are black.

Are Those Frequent-Flier Plans Ethical?

International Banking: The End of Let's Pretend

The Fight to Save Tylenol

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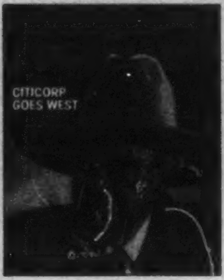

The urban cowboy in Alan Reingold's cover painting is Citicorp Chairman Walter B. Wriston, the newest big gun among western bankers. An article about the implications of Citicorp's takeover of Fidelity Savings of San Francisco is on page 83.

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November 29, 1982

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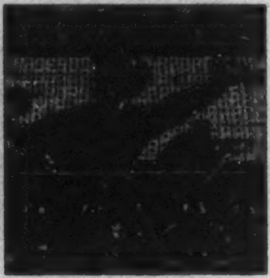

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The Airlines' Flying Jackpots

Are those valuable prizes available to frequent fliers perks—or kickbacks?

Thomas Larsen, 41, engineering director of Amfac Hotels, has earned six free trips on American by flying over 250,000 miles since May 1981. His job requires weekly travel from San Francisco to hotel sites in Honolulu and Dallas. Amfac doesn't ask employees to turn over bonus tickets, and Larsen says he always gets the lowest available fares.

by STRATFORD P. SHERMAN

Thousands of business travelers, including this writer, are finding themselves the innocent beneficiaries of what some consider a corporate rip-off. In the airlines' most recent effort to inspire brand loyalty among passengers who fly frequently on business, the carriers have launched promotional campaigns that some corporate travel managers see as blatant efforts to encourage the unscrupulous among us to defraud our employers. Others of us, honorable folk in responsible jobs, eagerly accept free plane tickets and other valuable prizes in return for our patronage, with never a thought that what we're taking might be a kickback.

These successful promotional schemes are aimed at travelers who don't pay for their own tickets. Ostensibly the airlines are rewarding their best customers, but in fact their best customers go unrewarded—the businesses that shell out some $20 billion annually on air travel. Most corporations let executives make their own travel plans, trusting them to act in the employers' best interest. The frequent-flier programs seem designed to subvert that trust. FORTUNE estimates that companies subsidizing the bulk of business travel have collectively lost out on $50 million or more in prizes and discounts.

Calling the cops won't solve the problem: these cleverly structured promotions are entirely legal. Though the programs differ in details, all operate on similar principles. Once a person signs up with an airline, the miles he travels on it become points counting toward a prize. Often he can also score "miles" by renting from Avis or sleeping with Hilton. Hertz recently started a Frequent Renter program under which a day's car rental earns points toward free tickets on American—and can also count as 1,000 miles in Eastern's program.

When a traveler has logged enough miles, he earns a prize ranging from a discount on a ticket to free air fare to Hawaii or Europe for two plus hotel room and rental car—or even more (see table, next page). Airlines award small prizes at

Research associate: Tom Post

Photograph by Peter Menzel

WHAT THE FREQUENT TRAVELER CAN GET

THE TRAVEL GAME

PROGRAM	STARTED	MEMBERS	TOP PRIZE	TRAVEL REQUIRED	TIE-INS
AMERICAN AAdvantage	May 1981	800,000*	Two 1st-class round-trip tickets on American, almost anywhere; car and hotel discounts	75,000 miles	Hertz, Hyatt, Holland America Cruises, British Airways
CONTINENTAL TravelBank	Oct. 1982	N.A.	Two 1st-class round-trip tickets on Continental to Hawaii, Australia, or New Zealand; car and hotel	125,000 miles	National Car, Hilton, New York Air, 14 commuter airlines
DELTA Frequent Flyer	Sept. 1981	350,000	Two 1st-class round-trip tickets on Delta, anywhere in the U.S. or the Caribbean; car, hotel discount	90 flight segments (between Delta stops)	Alamo Rent A Car, Avis, Marriott, 35 commuter airlines
EASTERN Frequent Traveler Bonus	Aug. 1981	400,000	Two 1st-class round-trip tickets on Eastern, anywhere but Central and South America and Canada; car	90,000 miles	Hertz, General Rent-a-Car
NORTHWEST ORIENT Free Flight II	July 1982	200,000*	One 1st-class round-trip ticket on Northwest, anywhere abroad but Canada	40 flight segments costing at least $100 each	None
PAN AM WorldPass	July 1982	300,000*	Thirty days of unlimited 1st-class travel for two on Pan Am, anywhere	$25 membership fee plus 175,000 miles	Sheraton
REPUBLIC Frequent Flyer	Aug. 1981	75,000	Two "business coach" round-trip tickets on Republic, anywhere in the U.S.	Six flights to join program plus 15 flight segments	None
TWA Frequent Flight Bonus	June 1981	600,000*	Two 1st-class round-trip tickets anywhere on TWA, including Europe; car and hotel discounts	95,000 miles	Hilton International, Marriott, Avis
UNITED Mileage Plus	May 1981	700,000*	Two 1st-class round-trip tickets anywhere on United, including Hawaii	75,000 miles	Avis, Westin
WESTERN Travel Pass II	Nov. 1982	N.A.	Four 1st-class round-trip tickets anywhere on Western, including Hawaii, Mexico, and Alaska; car	150,000 miles	Avis

*Fortune estimate

Each airline sets its own rules for the travel game, and no two are alike. The passenger who flies 75,000 miles on American can travel free to Hawaii or 80 other places—but not to Rio de Janeiro or a few Caribbean spots. The traveler must accumulate his points within 12 months. The United passenger can win tickets to anywhere United flies and take all the time he needs to score his 75,000 miles. Once a winner steps off a sponsoring airline's plane, he can sometimes get special breaks on rental cars, hotel rooms, and even ocean cruises.

around 12,000 miles, big ones at 50,000 miles or more. Lots of fine print spells out time limits and other restrictions.

By playing the game cannily the traveler can improve his chances for a big prize. Since a player only penalizes himself by spreading his business around, it's important to sign up with a carrier that both flies to the places he visits and offers generous rules. From New York, for example, American and United go to many of the same U.S. cities, but United's program makes it easier to win by giving members more time to accumulate miles. The passenger who decides to travel United whenever possible can still sign up with American and other airlines.

Most people who play the travel game with their employers' money aren't bent on doing anything wrong. And businessmen who travel 50,000 miles or so in one year often feel they deserve a reward. Thunders a midwestern banker who took his girl friend to Hawaii courtesy of American last spring: "By God, if you fly 50,000 miles on one airline, you ought to have a vacation."

The real high-mileage players, perhaps

continued

"If companies forced people to turn in their prizes, we'd try to curtail the program."

10% of any frequent-flier plan's membership, rarely settle for such lesser prizes as discounts on tickets. Gunning for that big win—an expenses-paid vacation—many entrants willingly accept inconveniences they'd never put up with otherwise. "Very often," says one traveler who is already planning his family's second bonus vacation, "I'll wait three or four hours for the American flight."

It's when companies are suckered into paying needlessly high fares that the airlines' promotional programs can cost them the most. Says Robert Green, head of travel at Ralston Purina, "There are a number of people who specify an airline, even at twice the cost, just to accumulate mileage." A trip from New York to Chicago can cost $35 on Ozark and $244 on Eastern—but a member of Eastern's program might well prefer the $244 flight. Surprisingly, a new American Express survey suggests that many companies are not taking advantage of the computer systems that could control this expense. These systems are available to even the smallest companies through travel agents.

Besides tempting workers to squander time waiting for planes and money on high-cost flights, the frequent-flier programs could lead the larcenous few to spend company money flying for mileage alone. A round trip from New York to Los Angeles by way of Dallas adds only 296 air miles, but can push the cost from under $350 to more than $800.

How to steal passengers

The current wave of airborne giveaways was originated by American Airlines in May 1981 for reasons that sound innocent indeed. "The question we asked ourselves," remembers Thomas G. Plaskett, senior vice president for marketing, "was how to build brand loyalty when we're selling a commodity." Loyalty is crucial at a time of flat ticket sales and heavy discounting, when the only way for an airline to grow is by stealing passengers from the competition.

Another question American asked itself was how to steal passengers without breaking the bank. The airline figures that it gave up revenues totaling $50 million in 1979 to match a United promotion that awarded each passenger a coupon good for a 50% discount on a future flight. Though Plaskett says American would have lost $6 million more if it *hadn't* adopted the coupons, it was the sort of disaster he and his cohorts didn't want to repeat.

The frequent-flier program American's planners devised addresses the cost problem by focusing on a small and carefully targeted market segment, the people who fly at least 12,000 miles a year. There are only a million such people in the U.S., yet they produce a disproportionately large amount of domestic airline revenue—perhaps 65%.

American knows full well that its competitors will match any discounts it offers corporate clients, and the last thing it wants is a fare war in business travel, its biggest and most profitable market. Far better to single out the frequent fliers, especially since few of them pay for their own tickets except on infrequent personal trips. These travelers have proved willing to sell their loyalty for what must seem a pittance to American's marketing team. A free ticket to Hawaii and back, worth nearly nothing to an airline glutted with empty seats, is enough to transform a fickle flier into an airline devotee.

That's where the marketers may have overstepped the bounds of ethics. Unlike the free drinks and courteous smiles offered as inducements in the past, plane tickets are negotiable instruments of substantial value. One enterprising investment banker in New York traded his frequent-flier trip to Hawaii to his dentist in return for new bridgework, and plenty of prizewinners have sold their tickets to other individuals for cash. According to Alan E. Gross, whose Maryland firm, Agco, brings together buyers and sellers of bonus tickets, "Many of our customers tell us the last thing they want is more flying."

Once committed to the notion of frequent-flier programs, American and its competitors had to design them to make it hard for corporations to benefit. After all, if brand loyalty is to be created, the traveler must be the one to enjoy the reward. The airlines know from painful experience that once an alert corporate travel manager gets his mitts on a freebie—as many did on the half-fare coupons—he'll use it to maximize his company's savings. "Obviously we wanted the traveler to get the award," says Brian J. Kennedy, TWA vice president for advertising and sales. "If companies forced people to turn in their prizes, we'd try to curtail the program."

No companies need apply

By design, therefore, the programs have become private clubs from which companies are explicitly excluded. Only individuals may be members, and they often have their mileage statements sent to their home addresses. A person who has earned a free ticket must formally request it, at which time some airlines let him transfer rights to the ticket—but only to another individual. The carrier then sends a nontransferable coupon good for a ticket.

All that rigmarole is evidently meant to impose prohibitive costs on companies that try to recapture the prizes their employees win. The amounts involved are significant. Companies that do seize the prizes can expect roughly a 5% rebate on their winners' fares. But policing the travel game looks more expensive to some companies than it is worth. "I'd have to hire five people just to keep track," says the manager of one FORTUNE 500 company's $20-million travel budget. Since only part of that budget is spent by frequent fliers, she doesn't think the outlay would be worth it. Moreover, travel managers guess that only half of most companies' frequent fliers participate in any program—and not all fly enough to win. Those who do win presumably wouldn't be pleased to have their employers confiscate what the winners regard as hard-earned perks.

So most corporations let employees hang on to the prizes they win. A spokesman for Du Pont explains why his company has not tried to move in on its frequent fliers: "It's not our style to set up a policy we can't administer fairly." Hardly

continued

any businesses actually monitor employee mileage. A few, including Chrysler Corp., plan to demand that employees hand over their prizes even in the absence of a policing effort. Admits the travel chief of a big New York advertising agency that's trying the same bluff, "I'm assuming I'm getting cooperation, but whether or not I am, I can't determine."

Among the airlines the big winners on frequent-flier programs are American, United, and possibly TWA. They signed members up early and offer the broadest route systems. It's no small feat, though, to figure out just what they've gained. American has the clout to shave its costs by enforcing a 12-month limit on mileage accrual. Its program has enrolled some 800,000 members, of whom perhaps 75,000 are terrifically valuable clients, each flying some 30,000 miles or more a year. But United and TWA both have burgeoning programs of their own. TWA attracts members by offering free tickets to European cities, such as Rome or Paris, that are especially popular destinations for vacationers.

The three big winners all claim a "significant" net increase in revenues from their programs. At TWA some of the increase is thanks to bonus trippers who take paying companions along. American (1981 sales: $4.1 billion) says it reaps as much as $100 million of extra revenues annually. But that's gross, not net. American concedes that some of its former regular passengers have defected to competitors' programs, and prizewinners sometimes displace potential paying customers or take free trips for which they'd otherwise have paid.

Still, American's "share gap"—the number of percentage points by which its actual market share differs from its share of industry capacity—has risen from 0.6 point in 1980 to 1.2 points this year. Each tenth of a point represents $5.4 million in sales. TWA and United also report increased market shares

Two miles for one

One element of the plans is helping most of the major carriers. While keeping track of all that mileage, they are also stuffing their computers with extremely valuable data about the flying habits of customers, information they use to stuff special offers into the mailboxes of the ones most likely to respond. American quickly built a clientele for 11 new daily flights from Dallas/Fort Worth last year by advising program members who had recently flown there that they could count each mile flown on these routes as two.

Some of the smaller airlines, including Western, have lost business since the frequent-flier war started. In an eye-catching effort to keep up, Continental is advertising a "Fly Now, Pay Never" program that lets members take bonus flights anywhere the airline goes in the continental U.S. and Mexico before they've been earned. Passengers have a year to reduce or eliminate the resulting debt by racking up miles in Continental's program. If after a year the travelers still owe something on their tickets, they can pay it back in installments. Those who take a free flight without stepping aboard another Continental plane will have enjoyed a year's interest-free loan before the bill falls due.

The appearance of a lot more paying passengers would quickly kill the frequent-flier gimmick, since even the warmest-hearted airline would rather sell seats than give them away. But with airline load factors averaging 60% of capacity and corporate travel managers reluctant to track down the prizes they have paid for, the getting is still good. ▣

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The Man Who Markets Silicon Valley

If Corning Glass Is So Smart, Why Isn't It Rich?

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December 13, 1982

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FORTUNE

THOSE
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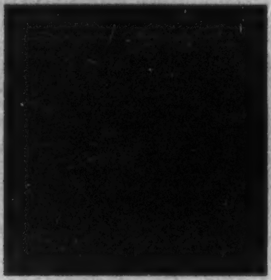
The landing is soft for executives wearing golden parachutes, but the contracts are controversial. The cover photograph is by Larry Williams, the story is on page 82.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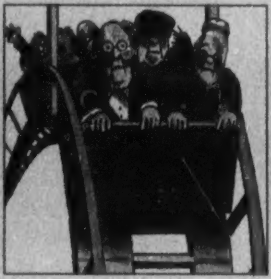
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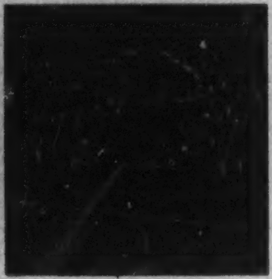

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COMPENSATION

Those

"Golden parachutes" that compensate managers who lose takeover battles are stirring debate.

by ANN M. MORRISON

The quality of stockholder mercy is not strained. It allows executives with "golden parachutes" to droppeth as the gentle rain after a takeover attempt. These men are twice blessed. They are blessed if they win, for they keep their companies, their positions, and their compensation. They are blessed if they lose, for they still keep their compensation even if not their jobs.

A golden parachute is a special employment agreement, usually including a generous severance package, that protects certain key executives if control of their company changes hands. As the result of more than 1,700 mergers and acquisitions so far this year, on top of 2,395 in 1981, more and more golden parachutes are filling the skies. Ward Howell International, an executive-recruiting firm, recently examined the proxy statements of 665 industrial companies from the FORTUNE 500 and Second 500 lists. The study found that 15% offered parachute provisions to top managers. A FORTUNE survey that included the Ward Howell sample as well as retailing, financial, service, and other manufacturing companies turned up 155 with golden parachutes. The tables on the following pages are based on this survey. Pearl Meyer, an executive consultant at Handy Associates, a compensation consulting firm, thinks that as many as 30% of major corporations may have these agreements.

Whatever the number, it is sure to grow unless the merger and acquisition craze evaporates. While there's no doubt that golden parachutes are fine for the executives who have them, their value to shareholders is the subject of lively debate.

The principal argument on behalf of golden parachutes is that executives whose company faces a takeover attempt will not be financially at the mercy of the would-be acquirer. So fortified, the reasoning goes, they will be able to weigh any takeover offer—and decide to accept or resist—strictly on its merits to the shareholder. "I truly believe that key executives need to be financially secure in order to strike the very best deal for their shareholders in takeover negotiations," says Meyer, who has sat in on a score of these

Research associates: Royce D. Wolfe and Jaclyn Fierman

FORTUNE
December 13, 1982

Executive Bailout Deals

negotiations. B. Charles Ames, 57, who was chief executive officer of Reliance Electric when Exxon came acquiring in 1979, maintains that having a parachute made him more willing to stand up to the world's largest company. "It gave me the assurance I needed to do what I had to do," he says. First Ames got Exxon to raise its $65-a-share offer to $72. (Reliance had been selling in the mid-30s before the two companies began to talk takeover.) Then, when Exxon got bogged down in a Federal Trade Commission complaint that the proposed combination might be anticompetitive, Ames sued to compel Exxon to go ahead with the purchase of shares anyway. The FTC dismissed the complaint, and the shareholders got their money. Last year Ames moved on, voluntarily and without parachute benefits, to become chief executive of Acme-Cleveland, a machine tool company, where he also has change-of-control provisions in his contract.

Stockholders are also supposed to benefit because golden parachutes enable companies to hire and retain good executives. The argument here is that they extend protection against arbitrary firing, a typical provision of employment contracts, into the uncertain environment of the takeover. Joseph Flom, merger and acquisition specialist with the New York law firm of Skadden Arps Slate Meagher & Flom, says golden parachutes "are so common that a management that refuses them might very well risk losing the services of a number of key employees." Without the security of a parachute successful executives might hesitate to join a firm whose stock they consider seriously underpriced and hence open to raiding. Defenders also argue that golden parachutes can be a useful strategic tool when they increase the price of a takeover so much that raiders have to rethink their plans.

For every defender there's at least one critic. Parachutes are "the latest stupid example" of companies playing follow-the-leader in compensation policy, David J. McLaughlin, national director of Hay Strategic Compensation Services, a management consulting firm, told a Conference Board meeting in October. "Why should we pay these guys more to act the right way?" he adds. Felix G. Rohatyn, a senior partner in the investment banking firm of Lazard Frères and a prominent corporate matchmaker, serves as an outside director of six corporations, one of which has golden parachutes in place. "I find them philosophically very troublesome," he says. "If an executive needs a multimillion-dollar contract to get his mind clear in a takeover situation, then maybe he should see a psychiatrist."

To some extent, both the rationales of the defenders and the righteous anger of the critics mask the reality that a parachute can be just another item in the compleat executive's compensation package, along with his bonus, stock options, special insurance, and early-retirement and pension plans. Like other parts of the package, the arguments for it or against it may be primarily pragmatic: Does it exceed the amount required to attract and keep the right people?

Furthermore, not all parachute agreements are alike. For example, the amount specified may not be as significant as whether the chute opens easily or only in

Illustration by Teresa Fasolino, after Magritte

extreme circumstances. A carefully drawn agreement can guard against some of the most egregious possible damage. All compensation arrangements can be abused. But parachutes do seem especially subject to abuse, both by promising shareholders more than can be delivered and by imposing unjustified costs.

Consider some recent manifestations. In late summer Martin Marietta's management, after girding itself in parachutes, spurned Bendix's offer of $48 a share for the company (it had been selling at less than $32 for most of the year) and joined forces with United Technologies to take over Bendix. Martin Marietta will end up as an independent company with a lower book value, higher debt, reduced bond rating, and 39% of its stock held by Allied. It is hard to discern the benefits to the shareholder in this exercise; the guarantee of financial independence that was supposed to ensure clearheadedness among Martin Marietta's top management did not keep that management from fighting like tigers to fend off a raider that rubbed them the wrong way, even though its bid could hardly have left the shareholders worse off than they are.

Bendix shareholders did better. The Bendix management, carried along by the most generous parachute agreements of this takeover season, is selling out to Allied at $85, up from $52.50 when it all began. But William M. Agee, 44, the chief executive of Bendix, has said publicly that he would not have done anything differently had he not had a golden parachute. Then why did he have one?

Asked to justify his $4-million bail-out agreement—made during his takeover battle—Agee has usually responded that he didn't ask for a golden parachute but was certainly glad to have it. "The outside board was kind enough to give me one," he told a New York audience in October.

"Bullshit," says one of those outside directors. "The golden parachutes were initiated by management." In fact, he adds, the outside directors watered down management's proposals for the contract. The provisions now say that an executive cannot bail out unless he has suffered a "diminution in compensation or position" in the reorganized company. Originally there had been no such qualification. Though this is not likely to tie Agee to Allied (for his position will almost surely be diminished), it probably will encourage most of the 15 other officers protected by parachutes to stay. Another change imposed by the board requires that an executive who bails out and finds another job that pays as much will get full compensation for only 18 months, even though his contract might last for three or five years.

Free-falling shareholders

At Brunswick Corp., as at Martin Marietta, managers with parachutes left stockholders in a free-fall. In January Whittaker Corp., a health care conglomerate announced a hostile tender offer for Brunswick, a company that makes pumps, valves, outboard motors, bowling alley equipment and, at the time, had a thriving medical service business. The Brunswick management was thoroughly takeover-proof. Chairman K. Brooks Abernathy, 64, had a parachute protecting his salary through 1983 if the company changed ownership; ten of his top executives had agreements good for up to five years' pay; and the Brunswick outside directors with five years of service, those stalwart representatives of the shareholders, had guaranteed themselves a lifetime of fees—$22,000 per year. Brunswick not only spurned Whittaker's $26.50-a-share offer, it also sold off the object of Whittaker's desire, the medical unit, to American Home Products. When the dust settled in March, the Brunswick shareholders were left with a smaller, weaker company whose shares traded at half the level of the Whittaker offer.

Golden parachutes did not prevent executives of St. Joe Minerals from pursuing what a federal district judge called "a scorched-earth policy" in their efforts to fend off a hostile bid from Seagram last year. As soon as Seagram posted a bid of $45 a share (St. Joe was then selling for $25) its top executives wrapped themselves in parachutes, and the company undertook a defensive strategy that included buying back 25% of its stock at $60 a share, selling off a Canadian oil and gas subsidiary, and actively seeking other bidders. If all this failed, the St. Joe management said it would "pursue liquidation," and sell off its pieces to the highest bidder. Seagram went to court to restrain St. Joe from going ahead. Judge Milton Pollack not only excoriated St. Joe's strategy but declared that management's policy of awarding itself golden parachutes left "an aroma in the courtroom as if someone had thrown a skunk in the jury box."

In other cases top management seems to

LARGEST INDUSTRIALS WITH PARACHUTES

COMPANY	FORTUNE 500 RANK	SALES in billions
Phillips Petroleum	16	$15.
Sun	17	$15.
United Technologies	20	$13.
Ashland Oil	26	$ 9.
Allied	56	$ 6.
International Paper	77	$ 5.
American Can	81	$ 4.
Bendix	86	$ 4.
Firestone Tire & Rubber	88	$ 4.
National Steel	94	$ 4.

Du Pont's acquisition of Conoco—once No. 14 among the FORTUNE 500—proved last year that even elephantine companies can be hunted down and captured. Still it's hard to imagine a raider wily and determined enough to wrest United Technologies from its expertly acquisitive chief executive, Harry Gray.

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have assigned a higher priority to assuring the quality of its parachutes than to maneuvering on behalf of the shareholders. Soon after Seagram began making overtures in May 1981, Conoco called a special board meeting. The first item on the agenda, according to one person who saw it, was not what the stock activity meant for the shareholders but how to put in parachutes.

Taking flight at Mohasco

The existence of golden parachutes is not hard to spot in proxy statements. The key is usually the phrase "in the event of a change in control," almost always found in one of the paragraphs following the table listing the company's highest-paid officers. Parachutes need a change of control to open them—often the acquisition of 40% or more of a company's stock, but sometimes less. Executives of UNC Resources, formerly United Nuclear Corp., have parachutes that can operate when anyone acquires as little as 15% of the company.

MOST GENEROUS AGREEMENTS

COMPANY	CHIEF EXECUTIVE	AMOUNT in millions*
American Family	John Amos	$7.6
SK Technologies[1]	Robert Jensen	$7.3
Conoco[2]	Ralph Bailey	$4.1
Bendix[3]	William Agee	$4.0
Thiokol[4]	Robert Davis	$4.0
Allied	Edward Hennessy	$3.8
Pennzoil	J. Hugh Liedtke	$3.7
American Medical Int'l	Royce Diener	$3.1
Time Inc.	J. Richard Munro	$3.0
Celanese	John Macomber	$2.8
Esmark	Donald Kelly	$2.5
Hanna Mining	Robert Anderson	$2.3

[1]Acquired by Penn Central, 1981. [2]Acquired by Du Pont, 1981. [3]Acquisition by Allied pending. [4]Acquired by Morton Norwich, 1982. *Fortune estimates.

Of the 155 companies with parachute plans FORTUNE scrutinized, these offered the most protection.

Low thresholds present at least two potential problems. If, say, Chairman Charles G. Bluhdorn of Gulf & Western, which holds stock in at least a dozen companies, woke up one morning with a yen for a little more stock of a certain company, he could unintentionally set off a flock of parachuting executives by noon. (Intentionally or not, when Gulf & Western's stake in Mohasco, an interior furnishings company, went over the magic 20% mark, four executives bailed out with some $800,000 among them.) On the other hand, if a 20% change in ownership is a clear signal that a hostile bid is under way, one would think that a company would want all hands at the battle stations, not heading for the escape hatch.

The proxy statement details what the executive should get after control has changed. If he or she is "involuntarily terminated"—sacked—the executive is usually entitled to his annual base salary and bonus for a number of years, plus automatic vesting of his retirement plan, easing of his stock-option restrictions, and continuation of his medical benefits. The bonus part of the package is sometimes defined as the maximum amount for which he might be eligible. An executive who never hit the target while he was employed could possibly end up making more money not working for the company than he ever did while he was there.

How long does the contract last? Most compensation consultants think that two years of total annual compensation gives an executive enough time and money to plant himself somewhere else. But the recruiting division of Handy Associates figures that even in these depressed days a top executive can usually find a new job in eight months or so. That means that for 16 months, a bailed-out officer can double-dip. In only a few of the 155 parachute-equipped companies whose proxy statements FORTUNE examined for this story are executives required to give back some portion of their severance benefits if they find another job. Bucyrus-Erie, Pullman, and, of course, Bendix are among them. In the FORTUNE survey, 55% of the companies guarantee executives' salaries for longer than two years.

Some proxy statements spell out circumstances under which an executive could resign but still reap his benefits. The reasoning is that a new management could do a lot of things to force him out—move his desk to the lobby, make him the night elevator operator, transfer him to Two-dot, Montana—instead of firing him with severance.

In some cases, though, executives can receive all those benefits if they simply decide to leave the company for no particular reason after a change in control. To be sure, there may be a catch—usually the executive's acknowledgment that he cannot "in good faith" continue to fulfill the responsibilities for which he is employed. Charles Ames of Reliance has one of these good-faith clauses in his current contract at Acme-Cleveland. "I'm not sure what it means," says Ames. "I only know it puts a hell of a burden of proof on me." No one else knows what it means either, or how great that good-faith burden actually is. As more golden parachute cases come to court, presumably we'll all find out.

In the meantime golden parachutes are most likely to encourage executives to stay around for the critical transition period after their company is acquired if the agreements clearly reward them for the effort. Hudson Bay Oil & Gas, acquired by Dome Petroleum last year, offered standard parachutes guaranteeing up to three years' salary to 12 officers whose employment could be voluntarily or involuntarily terminated within two years after the change of control. Anyone who stuck it out beyond that time automatically got an extra year's salary.

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MONEY-LOSING COMPANIES WITH PARACHUTES

CORPORATION	NET LOSS in millions
Gulf Resources & Chemical	$77.5
U.S. Industries	$62.7
Allis-Chalmers	$28.[illegible]
Publicker Industries	$24.[illegible]
Pabst Brewing	$23.[illegible]
Great Western Financial	$15.4
American Bakeries	$ 7.[illegible]
Munsingwear	$ 6.[illegible]
Cadence Industries	$ 3.[illegible]
AVX	$ 2.[illegible]
Mirro	$ 1.[illegible]

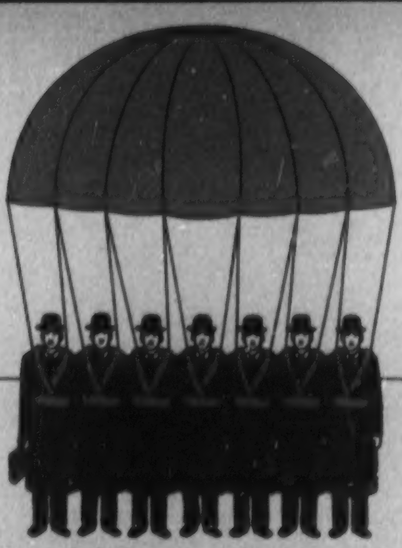
Golden parachutes are not necessarily awarded because of outstanding performance. Losses for the companies shown are for the 1981 fiscal year.

What the shareholder will not find in the proxy statement—or anywhere else—is evidence that the golden parachute necessarily serves its stated purpose in a takeover battle. Of course, these agreements are relatively recent and the variety of examples still limited. In some cases a plethora of golden parachutes can indeed make a takeover more expensive for the acquirer—any company wanting to put a bear hug on Beneficial Corp. would have to figure out how to get its arms around all 234 golden-parachuted employees, each of whom could walk away from the merged company with three beneficent years of salary guaranteed. But even Martin Lipton, the takeover strategist with the New York law firm of Wachtell Lipton Rosen & Katz, claims that a reasonable number of parachutes has "no deterrent effect whatsoever on takeover attempts." In most deals the cost of the employment contracts works out to less than 1% of the total transaction. Lipton, it should be observed, is not unsympathetic to golden parachutes. Noting that lawyers and investment bankers are well paid in takeover deals, he says: "I don't think that it's terribly wrong for executives with years and years of building the company to be paid a few million too."

The urge to keep control

A golden parachute can certainly help mitigate the damage a takeover may do to an executive's pride, prestige, and power. The taken-over chief executive can rather suddenly find that he no longer is able to commandeer the company airplane, appropriate the best office, or have the last word. These losses may be harder to take than a loss in salary. But management's tenacity in cases like Martin Marietta and Brunswick suggests that no force acts more powerfully on executive ego than the urge to preserve control and repel challengers, no matter what the cost.

Losing a job is a risk of doing business, of course, and there is nothing new about compensating executives for living with that risk. What troubles the critics of golden parachutes is the thought that they can amount to overcompensation. "What we're seeing now is more and more reward for less and less risk," says Graef Crystal, a compensation consultant with Towers Perrin Forster & Crosby. If a manager's record is poor or indifferent, he certainly could use a parachute, but why is he entitled to one? If he is a good performer he may well be retained, even promoted, by the acquiring company, despite the personal bitterness often generated in takeover battles. Hicks B. Waldron, 59, chief executive of Heublein, has, since his company's October acquisition by R.J. Reynolds, been widely rumored to be a possible successor to J. Paul Sticht, 65, chairman of RJR. Neither side brought parachutes to that merger.



MOST PEOPLE COVERED

COMPANY	PROTECTED EXECUTIVES
Beneficial	234
Kimberly-Clark	90
United Technologies	84
Colt Industries	36
Martin Marietta	29
Mapco	25
AMF	21
Emhart	16

Critics complain that golden parachutes protect only a chosen few at the top, leaving the troops below defenseless and demoralized. These companies may be trying to remedy the problem. In any case, a would-be acquirer of a company high on this list would have an expensive series of payments to make.

Even if an executive is redundant, bungling, and has made a lot of enemies during the takeover fight, he is not without resources. Almost all top executives have stock in their companies, which should run up in the course of the takeover. Ames of Reliance made some $3.8 million on his stock and options when Exxon took control. Many companies have introduced accelerated vesting of stock option plans that are triggered by a change in control. Under these, an executive can realize the cash difference between his option price and the selling price of the stock without having to purchase the stock. Walter McL. Robinson, 59, vice chairman of NLT, the Nashville-based insurance and entertainment company (Grand Ole Opry) that was acquired by American General Corp. early this month, realized almost $390,000 through this plan. He has said that he will take the money and forgo American General's offer of a three-year employment contract. Neither he nor any other NLT executive has a parachute.

Relatively few executives with golden parachutes have pulled their rip cords. Only a few lawsuits concerning golden parachutes have come before the courts, and none has been resolved. Stockholders of both Conoco and Bendix have sued their

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respective directors, charging that golden parachutes are a waste of corporate assets. Last month the Conoco shareholders' complaint was dismissed in the chancery court of Delaware on a technicality. The defendants, Conoco and some of its officers, had argued that because of its acquisition by Du Pont, Conoco has ceased to exist as a legal entity, and therefore its shareholders had no grounds for bringing a shareholder suit. The Conoco shareholders are appealing. The Bendix complaint charges, among other things, that the golden parachute contracts were entered into "for the sole personal benefit and aggrandizement of the individual defendants" because they provided for payment when the executives would no longer be working for Bendix. It is pending in the same court.

The case of Gulf Resources & Chemical is more complicated. This spring a dissident Gulf Resources shareholder, British-born investor Alan Clore, waged a proxy fight for control of the ailing company. The Gulf Resources board already had parachutes in place covering 21 officers and employees and amounting to $13 million—a bit more than the company reported in income from continuing operations last year. In fact, because the company closed a large mining operation, it reported a $77.9-million net loss for 1981. Clore won the proxy battle and fired eight top officers; the chief executive resigned the same day. A stockholder has filed suit in Delaware arguing that the company shouldn't have to pay their severance agreements because the stockholders had no say in them. In September Clore offered the fired executives one year's salary and bonuses if they would withdraw from the suit. They refused and took their claims to court; a decision is not expected for a year. Then he offered each of the ten executives still employed a three-year contract in return for dropping potential severance claims against Gulf Resources. They accepted.

FASTEST-OPENING PARACHUTES

20% change of ownership triggers benefits

COMPANY	BIGGEST STOCKHOLDERS	PERCENTAGE HELD
[illegible]	[illegible]	[illegible]
[illegible]	Maryland National	[illegible]
McNeil	Richard A. [illegible]	[illegible]
C. R. Bard	International Paper	14.[illegible]
Control Data	Morgan (J.P.) & Co.	[illegible]
[illegible]	Blair & Co.	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	T. Rowe Price Associates	[illegible]
[illegible]	[illegible]	[illegible]
American [illegible]	No single shareholder owns 5% or more of the company's common stock	
American Brands		
American Sterilizer		
[illegible]		

Most parachutes don't open without a change of control. But relatively modest shifts can trigger these.

Then there's the case of Nick A. Caporella, Victor Posner, and Burnup & Sims. In 1976 Caporella, who is 46, became the chief executive officer of B&S, a Florida-based miniconglomerate that designs and installs telephone and cable television systems and bottles Dr Pepper and Pepsi. Also in 1976 Victor Posner, the Miami Beach-based industrial scavenger, acquired 14% of Burnup & Sims. Since then Burnup & Sims's sales and profits have moved up smartly (in fiscal 1982 the company earned $9.3 million on $237 million), and Posner's investment moved up with it. In 1979 the board approved a golden parachute for Caporella that would pay a lump sum of 300% of his base salary, plus accelerated stock options, if any party acquired 29% of the common stock. By October of this year Posner had acquired more than 30% of the company, and Caporella resigned, taking 17 executives and $4 million in severance and stock options with him. Five stockholders then sued Caporella, complaining about the parachutes as well as about alleged insider transactions. At the end of October, Caporella was back in the chief executive's office, at least until January 1. He says he's looking for a successor and for ways to force the divestiture of the Posner holdings. Caporella is apparently the only executive to have his parachute money and his old job too.

Watch what they do

Shareholder actions seem unlikely to curb the parachute profusion, even though criticism is intensifying. But recent excesses may be creating a management backlash. In a survey of 170 chairmen of major corporations by the *Directorship* newsletter, 101 respondents said that their companies did not have golden parachute arrangements and did not expect to have them. A chief executive of a company with golden parachutes gave their classic defense: "If we are threatened by a takeover not approved by our board, we want our key executives not to worry or leave, but to stay and work diligently." For the parachuteless majority, one chairman intoned: "I and my board hold the opinion that golden parachutes are an unconscionable rape of a shareholder's assets."

Still, shareholders would be well advised to pay more attention to what managements do than to what they say. When T. Boone Pickens Jr., 54, Mesa Petroleum's chief executive, was asked about golden parachutes at a New York seminar on corporate reorganization in October, he replied, "My feeling, very simply, is to forget golden parachutes. I don't like them. I don't even like the tone of them."

Presumably, he was not referring to his own golden parachute, which, according to Mesa's 1982 proxy statement, would provide Pickens, at his discretion, "a termination fee equal to twice his base salary"—which last year was about $416,000—in the event of a change in control not approved by his board. ■

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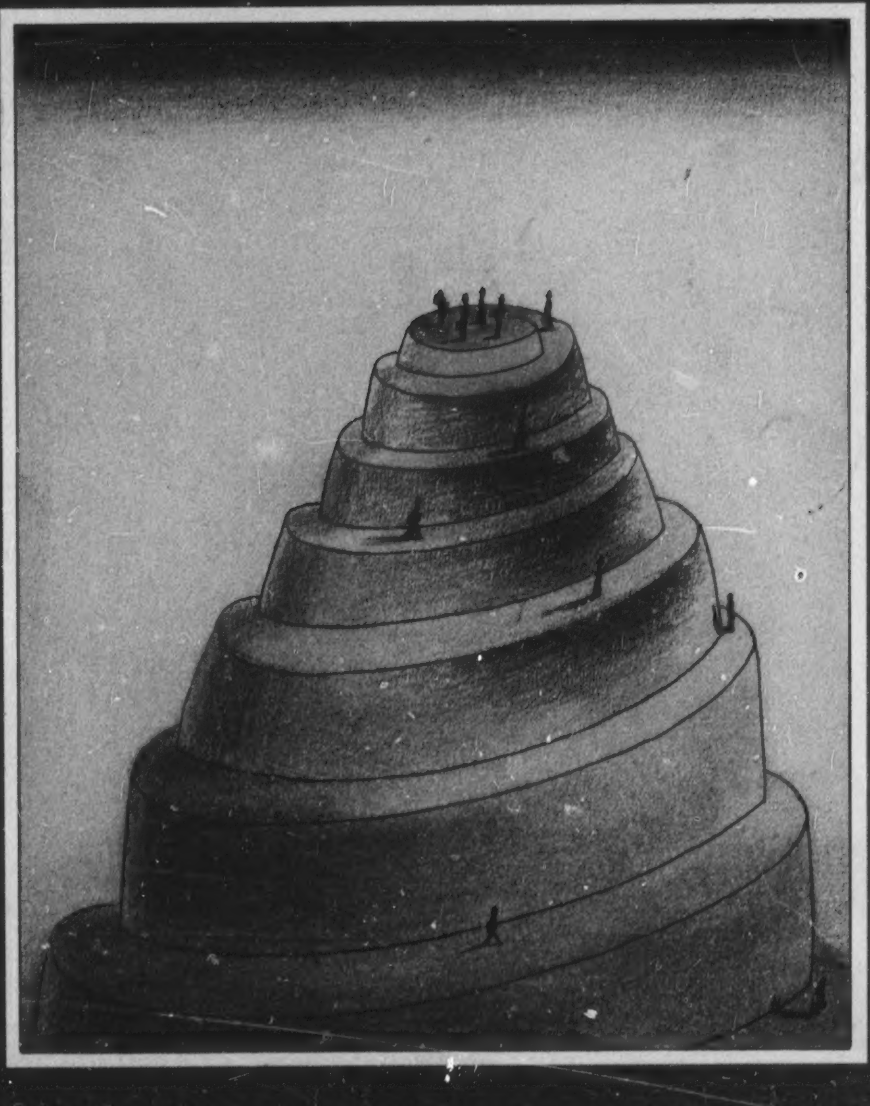
RANKING CORPORATE REPUTATIONS

A FORTUNE SURVEY



HOW JAPAN MANAGES DECLINING INDUSTRIES

FORTUNE FORECASTS THE NEXT 18 MONTHS

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CORPORATE REPUTATIONS

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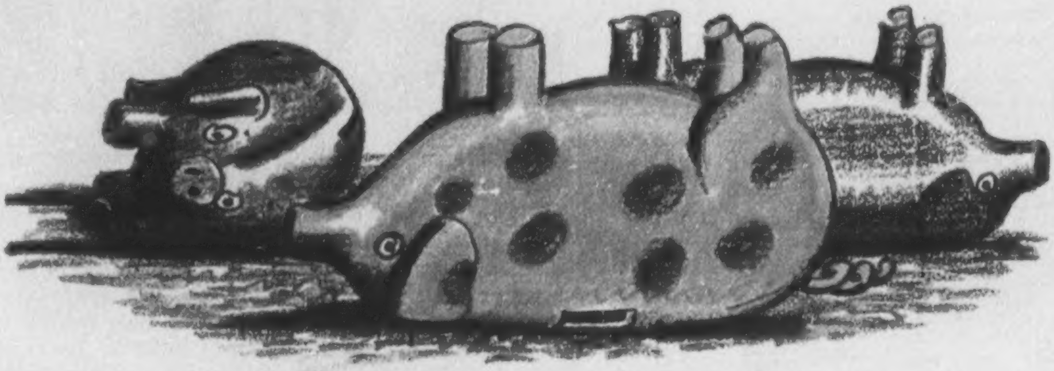

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RANKING CORPORATE REPUTATIONS

SURVEY/CLAIRE MAKIN

■ Among 200 of the largest U.S. corporations, IBM, the world's biggest computer company, is the most admired, with Hewlett-Packard, another high-tech company, close behind. The least admired is International Harvester, whose trucks and combines haven't been going anywhere. These judgments emerge from a FORTUNE survey of nearly 6,000 executives, outside directors, and financial analysts, who were asked to rate the reputations of the ten largest companies in America's 20 largest industries.

FORTUNE's survey, completed in September, drew responses from 51% of those polled—an unusually good return, according to polling professionals. The respondents in 20 groups, one for each industry, were asked to rate only companies in their own industry (or, in the case of security analysts, an industry they follow), using a scale of 0 (poor) to 10 (excellent). The industries represented in the survey are the largest in FORTUNE's directories of U.S. industrial and non-industrial corporations.

The companies in each industry group were rated on eight key attributes of reputation: quality of management; quality of products or services; innovativeness; value as a long-term investment; financial soundness; ability to attract, develop, and keep talented people; community and environmental responsibility; and use of corporate assets. The companies that rated highest and lowest among the 200 for each attribute are listed on pages 38 and 39. Tables on pages 40 to 44 show how each company ranks within its industry; the overall score for each company is the average of its ratings on all eight attributes.

HEWLETT-PACKARD and IBM each emerged with an average score of 8.26 out of the possible 10—higher than any of the other companies in the survey. But there was a tie breaker. IBM was accorded the top spot because it rated higher than Hewlett-Packard in five of the eight measures of reputation, most notably in perceptions of financial soundness, in which IBM scored a remarkable 9.21. That was the closest any company came to a 10 for any attribute.

FORTUNE's survey was conducted before someone packed cyanide into Tylenol capsules in Chicago, killing seven people. But the incident seems unlikely to have any lasting effect on the reputation of Johnson & Johnson, Tylenol's maker. One indicator: after an initial seven-point drop, Johnson & Johnson's stock returned to pre-crisis levels and in early December reached $49 a share, a record high.

Well-thought-of companies generally do well in financial terms too, and those with poor reputations do poorly. Four companies on the honor roll—IBM, GE, Merck, and AT&T—have triple-A bond ratings. Three others—SmithKline Beckman, General Mills, and Digital Equipment—are rated double-A. (Hewlett-Packard, Johnson & Johnson, and Eastman Kodak carry little debt.) The median return on shareholders' equity of the ten most-admired companies was an impressive 18.2% in 1981, vs. 4.5% for the ten least admired. The 1981 median for the FORTUNE 500 was 13.8%.

The most-admired companies' median net profit margin in 1981 was

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AT THE TOP AND BOTTOM OF THE 200 COMPANIES

The most admired

The 200 corporations in FORTUNE's survey were rated by their peers—executives and outside directors in their industries—and those who peer at them—financial analysts specializing in their industries. The scores are averages of each company's ratings on eight key attributes of reputation.

Rank	Company	Industry group	Score
1	**IBM**	Office equipment, computers	8.26[1]
2	**Hewlett-Packard**	Precision instruments	8.26[1]
3	**Johnson & Johnson**	Pharmaceuticals	8.14
4	**Eastman Kodak**	Precision instruments	8.02
5	**Merck**	Pharmaceuticals	7.92
6	**AT&T**	Utilities	7.91
7	**Digital Equipment**	Office equipment, computers	7.70
8	**SmithKline Beckman**	Pharmaceuticals	7.66
9	**General Electric**	Electronics, appliances	7.54
10	**General Mills**	Food	7.52

The least admired

Most of the companies at the bottom of the 200 have the bad luck to be in troubled industries, such as motor vehicles, steel, or forest products. But how their peers see their financial soundness and management quality has a lot to do with the ratings.

Rank	Company	Industry group	Score
200	**International Harvester**	Motor vehicles and parts	2.62
199	**A&P**	Retailing	3.17
198	**American Motors**	Motor vehicles and parts	3.78[2]
197	**Pan Am**	Transportation	3.78[2]
196	**F.W. Woolworth**	Retailing	4.09
195	**Crown Zellerbach**	Forest products	4.32
194	**RCA**	Electronics, appliances	4.50
193	**Republic Steel**	Metal manufacturing	4.57
192	**Tesoro Petroleum**	Diversified services	4.59
191	**National Steel**	Metal manufacturing	4.62

[1] Tie. IBM scores higher than Hewlett-Packard in five of eight attributes.
[2] Tie. American Motors scores lower than Pan Am in five of eight attributes.

10.7% of sales, more than double the FORTUNE 500 median of 4.6%. The least-admired companies had a melancholy median net profit margin of 0.9%. Price-earnings multiples followed the same pattern—a median hovering around 12 for the stocks of companies at the top and under 5 for their poor relations, only five of which are expected to turn a profit in 1982.

A company well respected for one attribute is likely to get good marks across the board.

ONLY in total return to investors, a measure combining price appreciation and dividend yield and therefore important to shareholders, did the highly regarded companies fail to perform outstandingly well. Their average annual ten-year median was 7.19%—surprisingly lower than the ten-year median of 8.52% for the FORTUNE 500. But the companies with poor reputations came in with a dismal *negative* return of 1.87% for the ten years.

In financial performance, SmithKline Beckman (1981 sales: $2 billion) is the brightest of the stars, with a 1981 return on equity of 30.2%, a profit margin of 18.6%, and a ten-year total return to investors of 20.18% annually. Pan Am was the overall loser here; it was in the red in 1981 and had a ten-year total return of minus 15.74%.

A strong position in a high-growth market naturally adds points to a company's reputation, whether the market is health care products or computers. Comments Chief Executive John Opel of IBM, "Certainly we chose the right industry to be in."

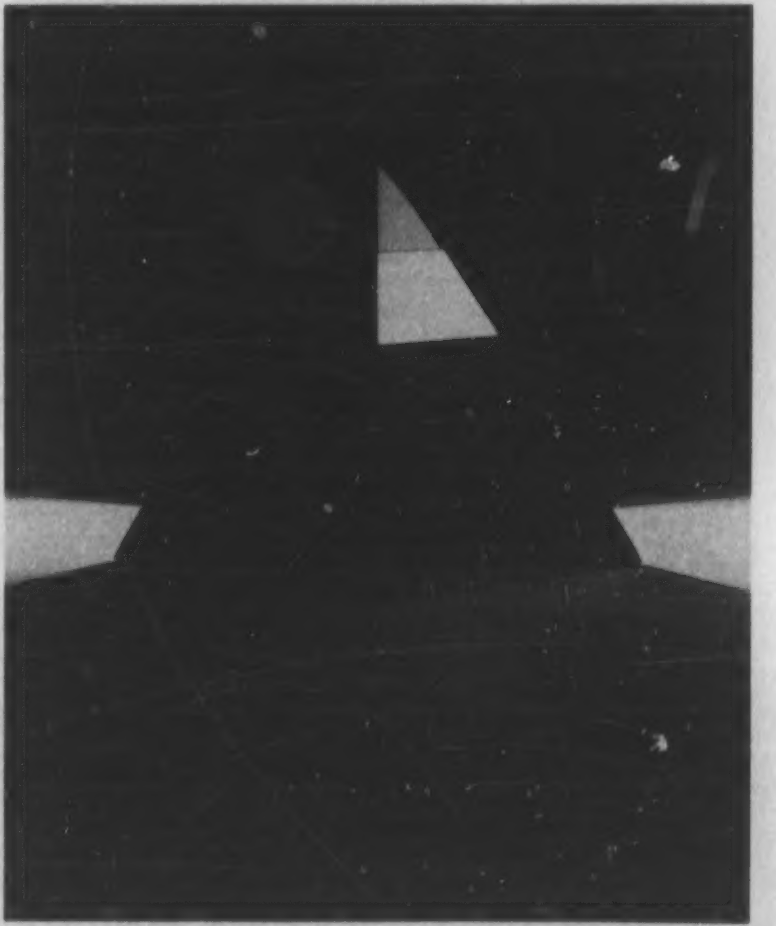
All the companies on the honor roll have chief executives who have been with their companies at least 20 years. In sharp contrast, eight of the ten companies rated lowest have hired, fired, or otherwise rearranged top managements in the past 18 months. Respondents in FORTUNE's survey seemed to equate poor corporate performance with poor management—although sometimes it's hard to establish which comes first. Wonders a Wall Street analyst who follows the ailing forest products industry, "Can shuffling the deck achieve anything in a capital-intensive industry?"

Almost all the high-rated companies stress motivating—and retaining—their most promising managers by allowing them freedom to make decisions within a few broad policy guidelines. Six of the companies—GE, Digital Equipment, Hewlett-Packard, Johnson & Johnson, SmithKline Beckman, and General Mills—pride themselves on being decentralized. "Decentralization is terribly important," says Bruce Atwater, chief executive of General Mills. "Good people won't work within a highly structured system—you've got to give them rein."

Corporations at the top of the list rank high in all eight key attributes—a company well respected for one is likely to get good marks across the board:

IBM was accorded the highest rating for quality of management, 8.86, given any company in the survey. It was also No. 1 for value as a long-term investment and for financial soundness, while ranking second in ability to attract, develop, and keep talented people; community and environmental responsibility; and wise use of corporate assets. In quality of products and innovativeness IBM fell from the top rank; in those categories it ranked eighth and 18th respectively.

Hewlett-Packard, No. 2, scored 8.29 for its way with people, the only attribute for which it scored first among the 200. But it ranked among the top three companies for four other attributes. For innovativeness, the $4.3-billion-a-year manufacturer of minicomputers and precision instruments rates higher than any other industrial company—8.46. (Citicorp and Merrill Lynch, both non-industrials, scored higher.) Hewlett-Packard's highest score was for quality of products, though Boeing and Caterpillar Tractor came out slightly better in this respect. Hewlett-Packard also has a



ERIC MEOLA

sterling reputation for management (8.76) and for investment value (7.99). In both respects it was regarded as second only to IBM.

Johnson & Johnson, No. 3, ranks just behind Hewlett-Packard in quality of management and value as a long-term investment. The company was also judged among the top three for use of corporate assets, financial soundness, and community and environmental responsibility.

Eastman Kodak attained the No. 4 spot while scoring first among the 200—with a rating of 8.32—only for community and environmental responsibility. The company's highest rating, 8.69, was for the quality of its products; it just missed being among the top three for this attribute.

Merck, No. 5 overall, earns higher marks for innovativeness—7.61—than any other pharmaceutical company; it is renowned as one of the heaviest R&D investors among the big-spending drug manufacturers. The company ties IBM in reputation for dealing with employees, scoring 8.15.

AT&T, No. 6, achieved its highest rating, 8.63, for quality of service. Thanks to Bell Laboratories, AT&T was rated 8.01 for innovativeness. Once a lead-footed behemoth in a monopolistic world, the company is trying to dance to the tune of competition, and FORTUNE's respondents rate AT&T's management highly, at 8.27.

Digital Equipment, No. 7, ranks second only to IBM in the office equipment group. "Digital is perceived," says Michael Geran, vice president and computer-industry analyst at E.F. Hutton, "as the company that founded and continues to dominate the minicomputer market." For innovativeness, Digital gets a 7.86, eighth among the 200 companies surveyed. It was rated 8.18 for management and 8.13 for products, both outstanding scores.

SmithKline Beckman, No. 8, was once just lackluster Smith Kline & French. But the company's ulcer remedy, Tagamet, introduced in the U.S. in 1977, has made it golden. The drug's 1982 sales, estimated at over $800 million, about equaled SmithKline's entire 1977 revenues. Tagamet accounts for some 60% of profits. A merger in early 1982 with Beckman Instruments, a manufacturer of medical diagnostic equipment, further polished the company's reputation. Pharmaceutical companies all rate highly for the soundness of their financial positions; SmithKline rated 8.54, fourth among the 200.

General Electric, No. 9, was beaten out, though just barely, by IBM, Hewlett-Packard, Johnson & Johnson, and J.P. Morgan in the ranking for management. GE's rating was 8.42. That verdict is a little surprising: former Chief Executive Reginald Jones was chosen best C.E.O. and GE the best-managed company in a poll of FORTUNE 500 chief executives (see "C.E.O.s Pick the Best C.E.O.s," FORTUNE, May 4, 1981). Jones's successor, Jack Welch, is faced with the challenge of retaining the company's reputation for financial stability—it got an excellent rating of 8.32—while moving GE ahead in high-growth markets such as microelectronics. This effort might perk up the company's reputation for innovation, a run-of-the-mill 6.77. Welch feels GE doesn't always get the credit it deserves: "My inward feeling is that we are leaner, more demanding, and more agile than we are perceived to be from the outside."

General Mills, No. 10, is one of the top-ranked companies that was not rated first among the 200 for any single attribute of reputation. (The others: Merck, AT&T, Digital Equipment, SmithKline Beckman, GE.) The $5.3-billion-a-year packaged-foods giant stays ahead of the competition by plowing back cash generated by such brands as 103-year-old Gold Medal flour into high-growth cash users like its Red Lobster restaurant chain. The maker of Wheaties, "Breakfast of Champions," rates 7.64 for financial soundness, ahead of 181 of the companies in the survey.

LEAST-ADMIRED big companies are ruled by uncertainty—about management, markets, and earnings. **International Harvester**'s ranking as No. 200 is probably predictable, given its lingering flirtation with bankruptcy. The company's management changed in May, when Archie McCardell was replaced as chief executive, but it still gets a dismal rating of 2.58. This is a good deal better than Harvester's score for financial soundness, a barely perceptible 0.6.

Great Atlantic & Pacific Tea, No. 199, has been staggering for years. A&P last paid a dividend in 1978. Managements changed and so did ownership. The huge chain (1981 sales: $7 billion) is now controlled by the Tengelmann Group, a German retailer. A&P landed among the three lowest-rated companies in all eight of the attributes of reputation surveyed except long-term investment value and financial soundness, in both of which it came in fourth from last. Trimming unprofitable stores and a third of its work force may have put A&P in the black in 1982 for the first year since 1977.

American Motors, No. 198, was slow to upgrade the fuel efficiency of its cars, though it had been the first major U.S. carmaker to trumpet the thought that small is beautiful. The company ranks a low 4.66 for product quality. (**Chrysler**, No. 189 overall, with an average score of 4.85, just escaped a place among the ten least-admired companies.)

Pan Am, No. 197, which had the same overall score as American Motors, 3.78, rated higher than the automaker on five attributes; that was the tie breaker. Pan Am's lowest rating, 2.07, was for financial soundness; it has been selling off everything from its Manhattan building ($400 million) to Intercontinental Hotels ($500 million) in a desperate effort to stay airborne. The company also falls among the lowest scorers for use of assets and long-term investment value.

F.W. Woolworth, No. 196, is the only retailer other than A&P among the least-admired corporations. Just five companies rate lower for management than Woolworth's 4.39. In September, a few weeks before his sudden death, Chief Executive Edward F. Gibbons resolved the company's identity crisis by deciding to close down 336 money-losing Woolco discount stores and concentrate on variety and specialty stores, including shoe stores. (See "Ed Gibbons's Legacy to Woolworth," FORTUNE, November 29.) Of the 200 companies, Woolworth scored

The least-admired big companies are ruled by uncertainty—about management, markets, and earnings.

lowest for product quality—4.47.

Crown Zellerbach, No. 195, did not rank lowest or very high either for any one attribute. Perceived as the high-cost producer in its industry, the forest products company has achieved an average annual total return to investors of only 3.55% over the past ten years vs. an industry median of 8.12%. Its highest score was 5.64 for product quality, and its lowest, 3.43, was for long-term investment value.

RCA, No. 194, drained its coffers by diversifying away from electronics and entertainment in the 1960s and 1970s, and the company's lowest rating—3.74—is for use of assets. The door of RCA's executive suite has been revolving—four chief executives in six years—and the company received an unimpressive 3.99 for management.

OPERATING LEVELS in the steel industry are below 40% of capacity, lowest since the Depression, and two steelmakers are among the least admired. **Republic**, No. 193, has continued to pour dollars into a broad modernization program, and its value as a long-term investment was rated at 3.83—lowest in the metal manufacturing group. **National Steel**, No. 191, beset by weakness in its savings and loan and aluminum businesses as well as steel, is facing an estimated 1982 deficit of over $200 million.

Perhaps the least-known company on the list of the poorly regarded is **Tesoro Petroleum**, No. 192. Its low overall rating has little to do with the state of its industry, petroleum refining and marketing. Unlike some other companies rated low, Tesoro (1981

EIGHT KEY ATTRIBUTES OF REPUTATION

	Most admired	Score	Least admired	Score
Quality of management	IBM	8.86	International Harvester	2.58
	Hewlett-Packard	8.76	A&P	3.44
	Johnson & Johnson	8.4[illegible]	RCA	3.99
Quality of products or services	Boeing	9.09	F.W. Woolworth	4.47
	Caterpillar Tractor	9.04	American Motors	4.66
	Hewlett-Packard	8.77	A&P	4.86
Innovativeness	Citicorp	8.61	A&P	2.92
	Merrill Lynch	8.56	International Harvester	3.43
	Hewlett-Packard	8.46	F.W. Woolworth	3.62
Long-term investment value	IBM	8.11	International Harvester	1.58
	Hewlett-Packard	7.99	American Motors	2.50
	Johnson & Johnson	7.87	Pan Am	2.66

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sales: $3 billion) is not awash in red ink—it made $80.2 million in 1981—and has not been realigning top management: Chief Executive Robert V. West Jr. founded the company in 1964. Tesoro's problem is uncertainty even in its industry about just what it's up to. In 1975 the company made an investment in Commonwealth Oil Refining that went sour when Commonwealth developed acute financial problems; the investment was written off in March. Tesoro's lowest rating—4.12—was for use of assets.

Reputation can assume as many shapes as Proteus, the Greek sea god, and be as difficult to pin down. But when Michael Geran of E.F. Hutton was asked why IBM is so well thought of, he replied that the company's reputation rests on accomplishment. "Perception is reality," he says. FORTUNE's survey suggests that this claim, argued by philosophers through the ages, isn't far off the mark.

■ The best recipe for a golden reputation seems to be fast growth and few surprises—not an easy combination to sustain. Ten years ago, for example, Polaroid and Xerox would almost certainly have been high on anyone's list of well-regarded companies; in this survey both ranked in the midrange. Investors should note that except for fast-growing stars like SmithKline Beckman and Hewlett-Packard, the most admired companies weren't the best buys in the 1971-81 decade. But recently most of their stocks have outperformed the indexes. The market apparently shares the view of our respondents that these companies have positioned themselves adroitly for the Eighties. ■

	Most admired	Score	Least admired	Score
Financial soundness	IBM	9.21	International Harvester	0.60
	American Home Products	8.88	Pan Am	2.07
	Johnson & Johnson	8.78	Chrysler	2.15
Ability to attract, develop, and keep talented people	Hewlett-Packard	8.29	International Harvester	1.71
	IBM	8.15[1]	A&P	2.45
	Merck	8.15[1]	American Motors	3.11
Community and environmental responsibility	Eastman Kodak	8.32	A&P	3.45
	IBM	7.88	International Harvester	3.98
	Johnson & Johnson	7.76	F.W. Woolworth	4.50
Use of corporate assets	Johnson & Johnson	8.02	International Harvester	1.91
	IBM	7.96	A&P	2.93
	Abbott Laboratories	7.88	Pan Am	3.30

[1] Tie.

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HOW THEY RANK IN 20 INDUSTRIES

Aerospace
Boeing topped the 200 for product quality, but United Technologies bested Boeing in financial soundness and use of assets. The industry groups are based on OMB categories. Each company is assigned according to the business that contributed most to 1981 sales (or assets, for some financial companies).

Chemicals
The chemical companies are a homogeneous bunch. Lowest-ranked Celanese is not many strides behind top-rated Du Pont.

Rank	Aerospace	Score	Chemicals	Score
1	Boeing	7.47	Du Pont	6.84
2	United Technologies	7.20	Dow Chemical	6.63
3	Northrop	6.83	Monsanto	6.29
4	Rockwell International	6.80	Union Carbide	6.02
5	Martin Marietta	6.60	PPG Industries	5.82
6	McDonnell Douglas	6.44	NL Industries	5.81
7	General Dynamics	6.32	W.R. Grace	5.80
8	Lockheed	6.08	American Cyanamid	5.57
9	Grumman	5.76	Allied	5.46
10	Fairchild Industries	5.46	Celanese	5.36

Commercial banking
Staid J.P. Morgan, which does little retail business, outclassed all other banks in every attribute except community responsibility and innovativeness. Trend-setting Citicorp beat all 199 other companies for innovativeness.

Diversified financial
Fannie Mae (1981 assets: $62 billion), a private corporation with government backing, is the largest of these companies. But it ranks below the others for use of corporate assets and management.

Rank	Commercial banking	Score	Diversified financial	Score
1	J.P. Morgan	7.47	Merrill Lynch	7.44
2	Citicorp	7.09	American Express	7.41
3	BankAmerica	6.37[1]	First Boston	6.80
4	First Interstate Bancorp	6.37[1]	Aetna Life & Casualty	6.59
5	Bankers Trust New York	6.36	Travelers	6.18
6	Chemical New York	5.97	INA[2]	6.04
7	Manufacturers Hanover	5.94	Loews	5.87
8	First Chicago	5.72	Great Western Financial	5.22
9	Chase Manhattan	5.43	Fannie Mae	5.19
10	Continental Illinois	5.16	H.F. Ahmanson	5.12

[1] Tie. BankAmerica leads all banks in one attribute (community responsibility), First Interstate in none.
[2] INA has merged with Connecticut General to form Cigna Corp.

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Diversified services
American Hospital Supply scored highest in this group for all but three attributes. Phibro-Salomon, a commodities and securities trading company, was first for innovativeness and way with people. Halliburton was most admired for the quality of its oil-field products and services.

Electronics, appliances
GE outshone all others in its group, particularly for management. RCA was last except in community and environmental responsibility, for which ITT was rated lower.

Food
Almost everyone's favorite in the food industry is General Mills, which scored highest on all eight attributes. Greyhound—which gets more revenues from Armour, a food subsidiary, than from its buses—was at the bottom in every category.

Forest products
In this recession-weary industry, Kimberly-Clark was first in five of the eight attributes; its highest score was for product quality. Crown Zellerbach was rated lowest in all categories.

Rank	Diversified services	Score	Electronics, appliances	Score
1	American Hospital Supply	7.30	General Electric	7.54
2	Phibro-Salomon	7.08	Emerson Electric	6.93
3	Halliburton	6.96	Western Electric[3]	6.86
4	Super Valu Stores	6.44	Raytheon	6.74
5	Fluor	6.40	Texas Instruments	6.69
6	Fleming Companies	6.29	Motorola	6.61
7	Foremost-McKesson	5.94	Westinghouse Electric	5.48
8	CBS	5.82	Litton Industries	5.38
9	Agri Industries	5.68	ITT	5.28
10	Tesoro Petroleum	4.59	RCA	4.50

Rank	Food	Score	Forest products	Score
1	General Mills	7.52	Kimberly-Clark	6.79
2	Nabisco Brands	6.63	Weyerhaeuser	6.50
3	CPC International	6.49	Boise Cascade	6.14
4	Dart & Kraft	6.46	Georgia-Pacific	6.02
5	General Foods	6.21	International Paper	6.01
6	Beatrice Foods	6.02	Champion International	5.88
7	Ralston Purina	5.94	St. Regis Paper	5.82
8	Borden	5.71	Mead	5.38
9	IC Industries	5.47	Scott Paper	5.00
10	Greyhound	4.92	Crown Zellerbach	4.32

[3] Wholly owned by AT&T.

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HOW THEY RANK IN 20 INDUSTRIES

Industrial/farm equipment

In an industry well sprinkled with conglomerates, Caterpillar Tractor and its earthmoving equipment still rank first. Deere leads this group for innovativeness and community responsibility.

Life insurance

Northwestern is first overall and for four attributes, including quality of services and management. All but Aetna, Connecticut General, Travelers, and Teachers are mutual companies, for which investment value is not applicable.

Rank	Industrial/farm equipment	Score	Life insurance	Score
1	Caterpillar Tractor	7.48	Northwestern Mutual	7.15
2	Deere	7.27	Aetna Life[4]	7.12
3	Cooper Industries	6.97	Prudential	6.95
4	Dresser Industries	6.61	Connecticut General Life[5]	6.93
5	Combustion Engineering	6.55	Teachers Ins. & Annuity	6.36
6	Borg-Warner	6.30	Travelers[6]	6.34
7	Teledyne	6.17	John Hancock Mutual	5.85
8	FMC	5.93	Equitable Life	5.79
9	Ingersoll-Rand	5.88	New York Life	5.78
10	Kidde	5.61	Metropolitan	5.55

Metal manufacturing

Most of these companies are out of favor, especially for long-term investment value. Top-ranked Alcoa was rated highest for management and quality of products, from bottle caps to car bumpers.

Metal products

Gillette is here because the company gets more revenues from razor blades than any other product. With only security analysts as judges Whittaker would have been second, but industry executives and directors preferred Textron.

Rank	Metal manufacturing	Score	Metal products	Score
1	Alcoa	6.49	Gillette	7.09
2	Armco	6.13	Textron	6.50
3	Northwest Industries	5.71	Continental Group	6.36
4	Inland Steel	5.43	Whittaker	6.20
5	Reynolds Metals	5.25	Foster Wheeler	6.15
6	LTV	5.22	McDermott	5.95
7	Bethlehem Steel	5.05	Gulf & Western	5.81
3	U.S. Steel	4.97	National Can	5.47
9	National Steel	4.62	American Can	5.38
10	Republic Steel	4.57	Chromalloy American	5.13

[4] Wholly owned by Aetna Life & Casualty. [5] Connecticut General has merged with INA to form Cigna Corp.
[6] Wholly owned by Travelers Corp.

Motor vehicles and parts

TRW is champ of its industry in all respects except financial soundness, for which Bendix ranks first. The survey was made while Bendix and Martin Marietta were still dueling. Only Ford, AMC, and International Harvester rated lower than Bendix for management.

Office equipment, computers

IBM tops the rankings for all attributes except innovativeness: Wang comes in first there for its word-processing systems.

Rank	Motor vehicles and parts	Score	Office equipment, computers	Score
1	TRW	7.27	IBM	8.26
2	Dana	6.48	Digital Equipment	7.70
3	Eaton	6.47	Wang Laboratories	7.35
4	General Motors	6.31	Storage Technology	6.40
5	Bendix	6.29	Control Data	6.12
6	Signal Companies	5.85	NCR	5.76
7	Ford Motor	5.33	Honeywell	5.67
8	Chrysler	4.85	Pitney Bowes	5.24
9	American Motors	3.78	Burroughs	5.05
10	International Harvester	2.62	Sperry	4.93

Petroleum refining

Analysts gave companies in this group lower ratings than did the executives and directors polled, probably because oil stocks haven't been too slick lately. Both groups agreed, however, that Shell's greatest strength is management. Exxon rated third from last for use of assets.

Pharmaceuticals

The three top-rated drug companies are also among the ten most-admired corporations. Abbott just missed a place on that honor roll, but ranks third among the 200 for use of assets.

Rank	Petroleum refining	Score	Pharmaceuticals	Score
1	Shell Oil	7.26	Johnson & Johnson	8.14
2	Atlantic Richfield	7.17	Merck	7.92
3	Standard Oil (Indiana)	7.11	SmithKline Beckman	7.66
4	Standard Oil of Calif.	6.77	Abbott Laboratories	7.50
5	Exxon	6.42	Bristol-Myers	7.41
6	Mobil	6.35	Pfizer	7.33
7	Phillips Petroleum	5.77	Eli Lilly	7.14
8	Tenneco	5.62	American Home Products	7.10
9	Gulf Oil	5.53	Upjohn	6.33
10	Texaco	5.20	Warner-Lambert	5.46

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HOW THEY RANK IN 20 INDUSTRIES

Precision instruments
There are many well-regarded companies in this industry group, starting with Hewlett-Packard. But two high-fliers of yesteryear, Xerox and Polaroid, landed near the bottom. Polaroid takes last place for long-term investment value.

Retailing
Federated and Kroger, both Cincinnati based, vie for top spot among the retailers. Federated rates highest for financial soundness, but Kroger was judged the best bet for investment value.

Rank	Precision instruments	Score	Retailing	Score
1	Hewlett-Packard	8.26	Federated	6.93
2	Eastman Kodak	8.02	Kroger	6.90
3	3M	7.46	J.C. Penney	6.59
4	Perkin-Elmer	6.78	Lucky Stores	6.15
5	Tektronix	6.43	Sears Roebuck	5.95
6	Becton Dickinson	6.32	Safeway Stores	5.91
7	General Signal	6.30	American Stores	5.71
8	Xerox	6.22	K mart	5.52
9	Polaroid	6.04	F.W. Woolworth	4.09
10	Lear Siegler	5.75	A&P	3.17

Transportation
Railroads have overtaken airlines, especially in perceptions of financial soundness. Delta is the only airline that reached the stratosphere. Pan Am barely got off the ground.

Utilities
The experts who rated them agreed that all the largest utilities are well managed and provide excellent service. AT&T and Texas Utilities scored especially high for long-term investment value and financial soundness. Ma Bell is the only non-industrial among the ten most admired corporations.

Rank	Transportation	Score	Utilities	Score
1	Delta Air Lines	7.25	AT&T	7.91
2	United Parcel Service	6.91	Texas Utilities	7.16
3	CSX	6.34	Southern Calif. Edison	6.59
4	Santa Fe Industries	6.30	GTE	6.57
5	Burlington Northern	6.00	Commonwealth Edison	6.27
6	American Airlines	5.85	American Electric Power	6.19
7	UAL	5.67	Pacific Gas & Electric	6.01
8	Trans World	5.21	Southern Co.	5.87
9	Eastern Air Lines	4.67	Consolidated Edison	5.82
10	Pan Am	3.78	Middle South Utilities	5.76

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THE MORNING AFTER

MERGERS/CAROL J. LOOMIS

■ Is there trouble at Phibro-Salomon? Reports have been subterraneously circulating that Salomon Brothers, the Wall Street trading firm, would like to get out of the merger that just over a year ago joined it and Phibro Corp., one of the world's major commodities traders. John H. Gutfreund, head of Salomon, says the reports are "nonsense." David Tendler, chief executive of the merged company, Phibro-Salomon, escalates that to "total nonsense." Their words have a certain ring of reality. How could Salomon possibly undo the merger? As the traders at Phibro-Salomon know, a sale is a sale.

Yet it is easy to imagine Salomon being subterraneously and growlingly restless, since this deal, signed on October 1, 1981, has so far produced some wildly skewed results. Phibro's business, which rides on the strength of the world economy, was dismal during the first year of the merger. Ludwig Jesselson, 72, for many years head of the company and still its guiding force, supplies some perspective: "You know how long I have been with Phibro? Forty-five years. And I have *never* experienced as disastrous a situation in our commodities as I've experienced in the last two years." John Gutfreund, speaking for the Salomon camp, calls Phibro's performance in the merger's first year "a disappointment."

Salomon, on the other hand, made colossal profits in that period—around $300 million before taxes. Since Salomon, formerly a partnership, never before reported profits as a corporation does, comparing that amount with past results is tricky. But it appears that the $300 million is at least double the best operating profits Salomon ever earned before.

THAT ACHIEVEMENT, of course, occurred in a remarkable Wall Street year. Bond prices boomed, and so, eventually, did the stock market. The rise in these markets was precipitated, in part, by Salomon's powerful chief economist, Henry Kaufman, who in August changed his interest rate forecast, abandoning the prediction that rates would rise sharply before the end of the year and instead predicting a recession-induced decline. Piling funds into the market, and getting at least a small jump on the competition, Salomon made big money on bond and financial futures positions. In stocks, however, Salomon mistakenly identified the market's turn as a temporary blip.

RESEARCH ASSOCIATE: *Lynn Fleary*

PHOTOGRAPHS BY ELIZABETH ZESCHIN

AT PHIBRO-SALOMON

The firm stayed short on stocks for some days and ended up taking sizable losses.

In any case, the guns of August alone do not explain Salomon's great year. The firm made good earnings in earlier months and overall produced a standout performance in trading and investment banking. Some Wall Streeters believe Salomon's performance was aided by the merger. They say that the replacement of partnership capital with public capital enabled the company to operate with a verve not formerly feasible. The point is arguable—and shrugged off as dubious even by some of Salomon's top executives. Certainly any financial support that Phibro provided was indirect. Salomon did not draw at all on Phibro's funds during the year; in fact, it sent about $45 million of its own money upstream.

ONE YEAR'S RESULTS obviously do not foretell the final score on a merger. But right now Salomon's excuses for cheering look small. Had Salomon not sold out, the year's profits would have belonged to its partners rather than to a new mate that is so far bringing very little to the party. A further cause for dismay at Salomon should be the price of the original deal. Phibro paid $554 million for the firm. By almost any measure that looks like a world-class steal.

That judgment might seem to arise from hindsight. But a FORTUNE article just after the merger made the point, even then, that the price, when compared with Salomon's book value, "looks quite cheap." (See "Behind the Salomon Brothers Buyout," September 7, 1981.) Many Wall Street mergers later, the point seems incontestable, as the chart on the next page shows. Salomon, one of Wall Street's premier firms, sold for under two times book value. Even Bache, an acknowledged weakling on the Street, sold for more than two times book. On price alone, Salomon's sale of itself looks like just about the worst trade it ever made.

The sale occurred because Salomon's partners never imagined—"never in my wildest dreams," says one—that the firm could make as much money this year as it has. It also occurred because the partners saw other things in the Phibro deal that they valued highly: liquidity and the chance to merge with an apparently compatible, well-capitalized, look-alike, think-alike company. Liquidity was prized because it was almost totally lacking at Salomon, which by partnership agreement socked most of its profits into the partners' capital accounts instead of into take-home pay. The system kept the firm growing nicely, but it did not do much to improve the partners' life-styles.

A former partner at Salomon says that over the years many partners grew obsessively eager to see the firm change its rules, or go public, or make a deal—do *anything* that would allow them to snag their capital. He compares the Salomon partners to a herd of cattle burning with thirst, ready to stampede.

The deal the partners went for carried unusual terms. To begin with, Phibro paid Salomon's 62 general partners $254 million, of which $250 million was in the form of ten-year 9% notes, convertible over five years into Phibro stock at a price of $27.78. Concurrently, both the firm's general and limited partners withdrew their capital from Salomon, or in other words, realized its book value. They did

The opposite camps *at Phibro-Salomon are headed by John H. Gutfreund (far left), 53, of Salomon and David Tendler, 44, of Phibro.*

that by removing assets from the firm equivalent in value to its net worth on September 30, 1981, a fiscal year-end. The partners have never revealed that book value figure, saying only that it exceeded $300 million. A good guess would be that the amount was at least $350 million, and perhaps significantly more. (In the chart below, FORTUNE used a book value figure of just over $300 million, the minimum the partners admit to. Using a higher figure would present Phibro as having paid even a lower multiple of Salomon's book value than the chart shows.)

For $254 million in cash and notes, therefore, Phibro got a Salomon Brothers stripped of net worth. That state of affairs couldn't last, since securities firms must have a cushion of net worth to operate. So the deal required Phibro to make a $300-million investment in its new subsidiary. That brought the total purchase price to $554 million.

Today Salomon's executives do not try to argue that they got top dollar for the firm. They do talk about hindsight, however. They also defend the deal in terms of Phibro's stock price, which is important to the former Salomon partners because the convertible notes they received made them owners of more than 11% of the merged company. After the deal was done, Phibro stock fell from near $30 a share to $20. At that moment, says a Salomon man, the sale "was a lousy deal." Since then, as the market took off and the size of Salomon's profits began to be known, the stock has vaulted, hitting a high of $60 in mid-November. Recently, it was about $50.

At that price, the $250 million in notes is theoretically worth a handsome $450 million. But under the terms of the sale, conversion of 35% of the notes became possible on October 2, and some former Salomon partners have converted and sold. The price of Phibro-Salomon stock in early October was about $36. Those who sold then naturally cursed their judgment when the price rose to $60.

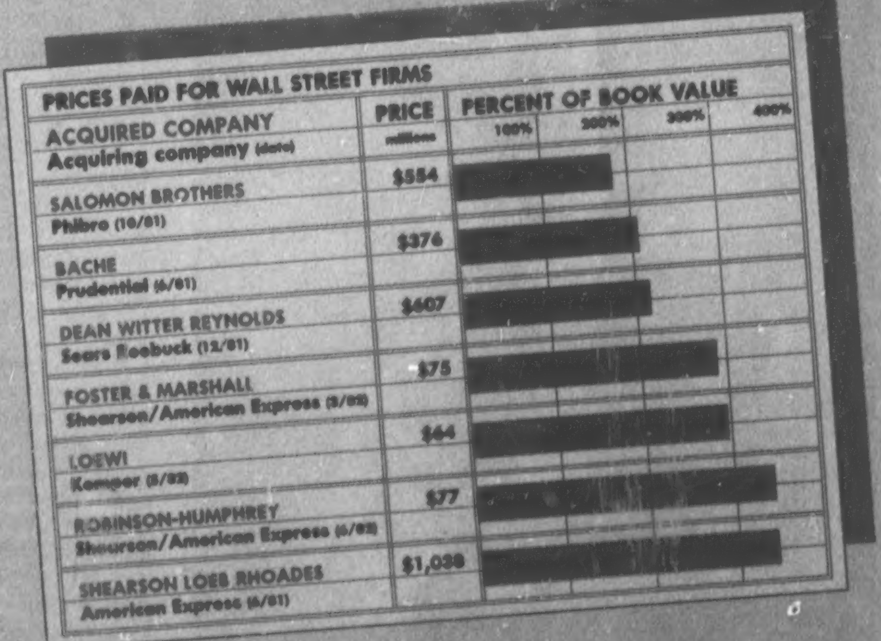
In any case, a rise in Phibro's stock does not make up for the low price on the deal. The Phibro-Salomon notes the Salomon partners hold simply represent one of the investments into which they put the proceeds of their sale. This investment, true, was required and has another special feature: the Salomon partners, by their work in the merged company, can help make their holdings pay off. But the notes are still an investment—a separate matter from the sale.

In bidding up Phibro-Salomon stock, Wall Street has been busy celebrating Salomon's earnings. It could not have been celebrating those coming from the Phibro side of the business, because at the moment they are insignificant. Indeed, if the merger had not been done, Phibro's stock would surely be selling today at a quite low price—perhaps $15 or under.

PHIBRO'S PROBLEMS, deeper than either it or Salomon anticipated, arise both from its trading operation, run under the ancestral name Philipp Brothers, and from its secondary business, Phibro Resources. As a worldwide trader of oil, metals, and just about every other commodity, Philipp Brothers depends for its livelihood on a healthy economy. Since that has not existed lately, the business has been terrible. Phibro Resources, equally dependent on economic activity, is an industrial operation with interests in fertilizer, zinc, vanadium, molybdenum, copper, and most of all, oil. These businesses account for about $450 million on Phibro's books, but in today's market they are surely worth less. That is certainly true for the $300 million in oil assets, which mostly arrived at Phibro by accident when it got caught up in the 1980 silver crisis manufactured by the Hunt brothers of Texas. The Hunts had signed contracts to buy silver from Phibro, but after failing to pay, they settled by handing over oil properties they owned in the Beaufort Sea off northern Canada.

SALOMON'S WORST TRADE EVER

The rush to buy Wall Street firms during the last two years has produced some high prices in relation to book values, but they didn't turn up in the Phibro-Salomon deal. Phibro paid less than two times book value for Salomon, the low price in these seven major acquisitions. Timing doesn't explain the bargain. Salomon negotiated its price knowing that Bache had sold a couple of months earlier for more than twice book and Shearson Loeb Rhoades for a fancy 3.4 times book. The real explanation is that Salomon wanted in some manner to unlock the capital its partners had in the firm and saw a merger with Phibro as the most attractive way to go about it. Among the several similarities between the two organizations is the tendency of both to pay employees lavishly, under the theory that the only assets the companies have that really matter are people.



PRICES PAID FOR WALL STREET FIRMS

ACQUIRED COMPANY Acquiring company (date)	PRICE millions
SALOMON BROTHERS Phibro (10/81)	$554
BACHE Prudential (6/81)	$376
DEAN WITTER REYNOLDS Sears Roebuck (12/81)	$607
FOSTER & MARSHALL Shearson/American Express (3/82)	$75
LOEWI Kemper (5/82)	$64
ROBINSON-HUMPHREY Shearson/American Express (6/82)	$77
SHEARSON LOEB RHOADES American Express (6/81)	$1,038

BEST AVAILABLE COPY

At the time there were questions about who got the best of the deal. Today the answer is clear. The properties, frozen and remote, are a sump for money in a world of depressed oil prices (see "How Dome Petroleum Got Crunched," page 84). "Let's face it," says a Salomon man. "Those guys, the Hunts, are just so smart. They took Phibro. The Beaufort properties will be worth a hell of a lot of money someday. The question, though, is whether that will be in our lifetime."

In the first quarter after the Phibro-Salomon merger, the fourth quarter of 1981, the troubles of both Philipp Brothers and Phibro Resources became clearly visible. Phibro-Salomon reported $75.6 million in pretax earnings, an amount roughly comparable to average earnings in the first three quarters. But that figure included no contribution from Phibro; its operating profits, subpar to start with, were swallowed up by write-downs of $27 million on Phibro Resources assets. Salomon, on the other hand, reported $80 million in pretax earnings, thereby accounting for all, and a bit more, of Phibro-Salomon's profits.

That, at least, is what the 1981 annual report shows. But there appear to be both confusions and tensions at Phibro-Salomon about who made what. Phibro executives say Phibro made a profit in that quarter. David Tendler was even amazed recently to learn that the annual report showed it didn't. "There must be a mistake," he said. "We've never had a loss quarter in our history."

The key to this puzzlement, it turns out, is about $15 million in quarterly interest expense applicable to the $554 million with which Phibro bought Salomon. Phibro thinks that expense should be charged to Salomon, and internal profit reports handle things that way. But in the fourth quarter Salomon was a nonconsolidated subsidiary and the debt was on the books of the parent company; so Salomon could not, in the annual report, be hit with the charge. Absorbing it instead, the Phibro side was shoved into a loss position.

In the first quarter of 1982 that particular confusion was settled by a change in corporate structure: Salomon became a fully consolidated subsidiary and now gets the interest charge. The first-quarter report pins the matter down, noting that Salomon accounted for 85% of earnings after deduction of the interest expense.

Since the first quarter, Phibro-Salomon has not said publicly what portion of its earnings are coming from each operating division. But a Wall Street analyst close to the company, J. Clarence Morrison of Dean Witter Reynolds, says that Salomon made about $225 million, or 75%, of the $300 million in total pretax earnings reported for the first nine months. In the first nine months of 1981 Phibro alone made $223 million.

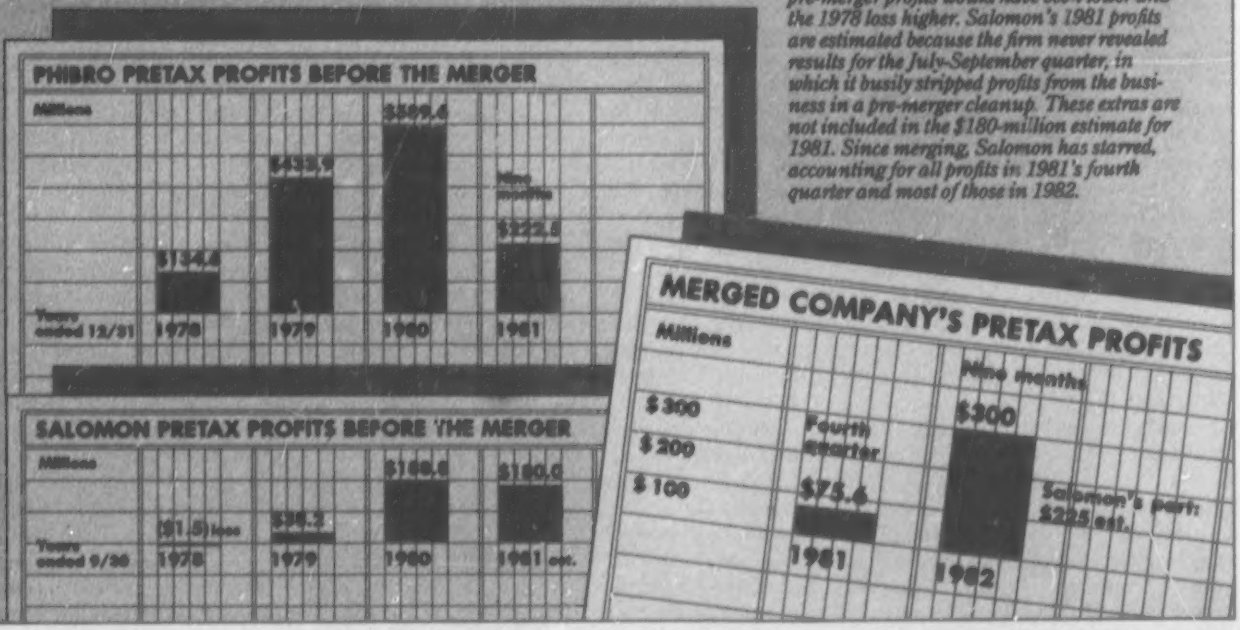
Salomon people have been talking privately about profit numbers that exceed those officially reported. At a dinner party recently, a Salomon insider told a friend that his part of the business had made $550 million in the year that ended in September. Other Salomon executives have been throwing around similar figures. They probably refer to profits before a lot of charges—the interest expense, amortization of goodwill, overhead assessments from Phibro, and some portion of bonuses. Still, $550 million is a big number.

ONE SURE THING about the merger is that Salomon's employees, including its onetime partners, were extraordinarily well compensated this year. The pay was consistent with Salomon's profits, with Phibro's reputation as a high-payer, and with the fervent desire of John Gutfreund (pronounced "good friend") to keep his key people happy even though the pleasures of partnership had disappeared. For the most part he seems to have succeeded. Turnover has not leaped, as doomsayers had predicted.

continued

A LOOK AT PROFITS: YOURS, MINE, OURS

Phibro's and Salomon's profit histories have some unusual wrinkles. Phibro's earnings in 1979 and 1980 came mainly from oil trading. Salomon's 1980 profits also got help from oil, through a $64-million gain on the sale of oil and gas properties. Salomon's profits differ from others on the charts because the firm was a partnership before the merger and paid partners relatively small salaries. Had they drawn typical Wall Street salaries and bonuses, pre-merger profits would have been lower and the 1978 loss higher. Salomon's 1981 profits are estimated because the firm never revealed results for the July-September quarter, in which it busily stripped profits from the business in a pre-merger cleanup. These extras are not included in the $180-million estimate for 1981. Since merging, Salomon has starred, accounting for all profits in 1981's fourth quarter and most of those in 1982.



"He's the man," *says an admirer of Ludwig Jesselson, referring to the power that the former chief executive of Phibro still has in the company. Jesselson, a vigorous 72, ran Phibro before it split from Engelhard Minerals & Chemicals in May 1981, then turned over his title to Tendler.*

The pay surely helped. A former Salomon partner says he believes the firm, in its eagerness to make the merger palatable, paid compensation well in excess of going rates on the Street. A Salomon insider mentions pay levels of $750,000 for middle-grade managing directors (the new name for onetime partners) and even for good traders. With that kind of pay scale, Gutfreund may well make as much this year as Tendler did in 1981: $2.5 million ($1.3 million in cash plus $1.2 million in stock that will be vested over five years).

It is interesting to compare a possible $2.5-million income with what Gutfreund could have earned (though not necessarily got his hands on) if Salomon had stayed a partnership this last year. The $2.5 million from Phibro-Salomon would at first glance look good because Gutfreund would be earning it without having the bulk of his capital at risk in his business, as he did at Salomon. But after that, the comparison pales. Gutfreund's share of Salomon's annual profits was around 5%. On $300 million in profits, his cut would have been $15 million.

Salomon has not totally escaped defections. Four onetime partners stepped out or took consultant status this last year. Among them was Jon W. Rotenstreich, 39, a highly regarded investment banker, who in December announced his intention to leave. The most notable departure was Richard G. Rosenthal, 40, an arbitrager, valued member of Salomon's executive committee, and one of two partners (the other was J. Ira Harris) who negotiated the Phibro merger. Rosenthal received $10 million in convertible notes from the deal in addition to getting his capital out of Salomon. Just short of his 25th anniversary on Wall Street this year, Rosenthal, who is a high-school dropout, arranged for a special meeting of Salomon's managing directors and said he was leaving because "it's time for a change." Rosenthal has since told friends he just didn't want to spend the rest of his life making money.

Rosenthal is working now only as a Salomon consultant and is also recovering from an operation. His departure, though it fits predictions that the newly cash-rich Salomon partners would lose their taste for hard work, is still considered rather mysterious around Salomon. This puzzle has also encouraged the quip: "Dickie left to finish high school."

While Salomon was paying through the roof this last year, Phibro was cutting back in people and costs, including compensation. Benjamin Bollag, an executive vice president of Phibro who left in September to start a competitive business, says the cutbacks have reduced Phibro's employee rolls by 15%. That would mean a cut of about 600 people. David Tendler says that is "too high," though he will not reveal the precise figure.

TENDLER'S SENSITIVITY on the point no doubt reflects Phibro's long-standing reputation as a "family company," averse to letting people go. For many years it did not do so. If business in one commodity was hurting, employees in that area were subsidized by the profits from another. In this recession, however, the weakness in Phibro's business has been so pervasive that cutbacks became, in Ludwig Jesselson's words, "painful but absolutely necessary."

Bollag thinks the link with Salomon put particular pressure on Phibro to cut back. Says he: "There was this knowledge in Phibro that Salomon was there watching and that we had to do something."

Other changes at Phibro included a reorganization last March. Philipp Brothers, formerly run by Tendler, was set up as a subsidiary and given a new chief executive, Thomas D. O'Malley, 41. In a route that Tendler also followed, O'Malley started his career at the company in traffic, moved up to trading, then into the management ranks, serving abroad at times. His most recent job was running Phibro's oil-trading business, the company's lead operation even now. O'Malley calls oil "the horse I rode to New York."

Oil has been run as a fairly separate area of the business and that led Phibro's management to believe that O'Malley could move into the rest of Philipp Brothers and make the sweeping changes required with a minimum of emotionalism. He's been doing just that. Bollag calls O'Malley "a tough fellow." He is plainly liked by the Salomon people, who see him as getting needed things done.

Last summer, after O'Malley had taken charge, Philipp Brothers and Salomon Brothers finally accomplished a brotherly chore that had been scheduled to be done months earlier. When the merger took place, the two companies had some competing operations. As a cure, Salomon was supposed to close down its commodity trading business promptly and Philipp Brothers its financial futures department. It just didn't happen—"for a variety of reasons," says Gutfreund, who regards the delay as an irritating mistake. Competing organizations, he says, lead to a feeling of "nagging distrust" and make one "look like a donkey" for permitting them to survive. Asked in an interview about the delay, Tendler dismisses its significance: "The important thing is that both businesses were closed."

That bit of cooperation is about as close to synergy as Phibro and Salomon have so far come, though as Gutfreund keeps pointing out, it is early in the game. Tendler, however, appears to have modest expectations about future joint accomplishments. "The synergy," he says, "was the merger." That rather amorphous statement seems to mean Phibro accomplished most of what it needed to just by getting Salomon and its band of experts into the fold. Considering Salomon's profits, Tendler may have a point.

An ironic note about the merger is that several Phibro-Salomon executives now describe the parts of the company as happily countercyclical. Salomon, they say, is a kind of leading indicator, with an ability to prosper in recessionary times while Phibro languishes; later, so the theory goes, Salomon may fade as Phibro recovers. In truth, it could all work out that way, and perhaps that outcome was even anticipated in 1981. But it was not presented publicly as a rationale for the merger when the deal was made.

Today, schooled in countercyclicality, the two branches of Phibro-Salomon operate autonomously and join together mainly to exchange information. Their executives meet weekly, usually at breakfast on Wednesday, sometimes gathering in uptown New York at Phibro's offices on the Avenue of the Americas, sometimes downtown at Salomon's near the foot of Manhattan. The executives are also the core of the company's board. Of 19 directors, six are from Phibro, six from Salomon, the rest are outsiders, most with Phibro ties. At the top of the board sits Tendler, as co-chairman and C.E.O. The other co-chairman is Gutfreund.

The two men are not much alike, and they seemed uncomfortable with each other during a recent lunch with FORTUNE that Tendler initiated to aid the preparation of this article. Tendler took the lead in answering questions, but he is not notably informative. He talks in generalities, shuns financial subjects, and admits to secretiveness, which he says trading taught him. His intelligence, some people say, is of the street-smarts variety, useful in Phibro's hurly-burly world. Gutfreund's intelligence is much more on display, and he is more forthright. But he can also flare up at a question he doesn't like—as he often flares up on the Salomon trading floor. At the lunch he frequently seemed morose, as if to ask, "What am I doing here?"

The tone of that lunch and separate interviews FORTUNE had with the two men make it easy to believe reports that a management struggle could erupt in the company. That prospect is no doubt increased by the skewed profits in 1982 and by the possibility that slack economic activity will prolong the imbalance. In exchange for its contribution to the till, Salomon may want more power than it has.

Ben Bollag, the departed Phibro executive, says that from the days the merger was first proposed, he felt it unlikely that Salomon and Phibro could get along well together. Says he: "My prediction is that it's only a matter of time before the Salomon team is going to be running Phibro." The reason, he says, is Salomon's "professional management," which he thinks superior to Phibro's.

That may make a few Wall Streeters hoot, since Salomon has usually been thought of as free-wheeling rather than as a citadel of management acumen. John Gutfreund himself, despite Salomon's super performance this year, goes out of his way to belittle his executive talents. But when he is asked for his appraisal of Tendler's management, he displays no great enthusiasm either: "It's been a very, very difficult year for Philipp Brothers. David made a major change when he made Tom O'Malley president of Philipp Brothers, and he must be credited for doing that. I think you have to give them some time to see how that works. I don't want to make a quick judgment."

Salomon's chief economist, *Henry Kaufman, got $10 million in convertible notes in the merger in addition to getting hold of his partnership capital. On October 2, all noteholders became free to convert and sell up to 35% of their Phibro-Salomon stock. Kaufman has sold some shares. Salomon's boss, Gutfreund, who received $13.6 million in notes, has sold no stock at all.*

IF A MANAGEMENT SHOWDOWN DEVELOPS, an important role in settling it may be played by Phibro-Salomon's largest stockholder, Minerals & Resources Corp. ("Minorco"), which owns about 27% of the stock. Minorco is the investment company through which the Oppenheimer interests of South Africa hold major portions of several corporations. Minorco's president, H. Ronald Fraser, sits on Phibro-Salomon's board and concedes that Minorco's large stake probably makes him a particularly "interested" director. Right now the Oppenheimer group could hardly be other than happy with its holding, since Salomon's arrival has, of course, vastly added to Minorco's wealth. Fraser speaks of the merger with amusing understatement: "It seems to us a very prudent and sound investment from Phibro's point of view."

The Oppenheimer interests have lately been sizing up John Gutfreund. In early April Gutfreund traveled with Tendler to South Africa for a get-acquainted weekend meeting with Oppenheimer officials during which some business topics, among them compensation policy, were discussed. Gutfreund describes the visit as a pleasant, English-country-house kind of weekend, whose purpose seems to him obvious. Says he: "If you were sitting in South Africa with a 27% stock interest, you'd be curious about these folks running Salomon Brothers and wondering whether these profits are a one-time phenomenon."

That is a good question. And another is the shape of future management at Phibro-Salomon. On the surface Gutfreund seems a stronger, more forceful personality than Tendler, and perhaps that would give Gutfreund an edge in a contest. But the merger itself makes it hard to knock Tendler's intelligence and touch. After all, Gutfreund sold Salomon—and Tendler bought.

■ Mergers that set out to solve one company problem sometimes end up, as this one has, raising troublesome new questions. Frequently, these revolve around management of the merged corporation. The possibility that a battle for power could erupt at Phibro-Salomon creates odd uncertainty about a stock that was one of the big winners in the bull market of 1982. ■

COMPANIES/JEREMY MAIN

GENERAL FOODS GOES BACK TO GROWING

■ For years the friends and followers of General Foods—a legion of former employees, Wall Street analysts, and ad agency people—regarded the company with a sort of exasperated affection. They admired its splendid portfolio of brand names, its premier market position in many packaged foods and drinks, and selling skills exceeded perhaps only by Procter & Gamble's, but General Foods' performance kept disappointing them. Acquisitions turned into duds, and new food products fell flat. Today, however, the company has a revival plan—and it just may be working.

Certainly anyone with his wits about him in 1981 might have wondered why investor Warren Buffett, Omaha's answer to Bernard Baruch, bought 2.6 million General Foods shares, 5.2% of the total. When the purchase was announced most security analysts were neutral to bearish on General Foods. The price of its shares drifted in 1981 between $24 and $35, about the same range they had covered since the 1974 recession.

THEN IN 1982 the shares climbed briskly to a high of $47, raising the value of Buffett's investment by $40 million, before easing off at year's end. The analysts changed their signal to "buy." Earnings for the six months ended in October were up 20%, after having stagnated for three years.

Philip L. Smith

The new appreciation is hardly gastronomic. Among the $8.4 billion of instant, frozen, powdered, ready-to-mix, freeze-dried, presweetened, and otherwise processed or artificially constituted foods and drinks it sold last year, none is likely to win culinary fame, except perhaps among children. However, the revised recipe for success has produced a fascinating concoction for connoisseurs of marketing, management, and strategy.

Unsuccessful acquisitions that didn't fit are being shucked off and replaced with companies that complement General Foods' primary business. Oscar Mayer & Co., the big processed-meat company, came aboard in 1981, and Entenmann's Inc., a strong regional bakery, in November. Venerable product lines have been revived with new formulations to put them wholesomely in tune with our healthful times, for example by adding honey and nuts to Raisin Bran.

Quite a few employees have been moved out to reduce overhead costs. Over the years company headquarters in White Plains, New York, had filled up with people who were intelligent, well educated, well bred, and not very aggressive. Former executives recall how relaxing it was to work at General Foods. "They became more engrossed with the process than with the product," says an ad agency executive who has worked closely with General Foods for years. "What mattered to them was the way things were done." Last year the company cut its work force significantly and shuffled the upper ranks of management.

Under Chairman James L. Ferguson, company strategy in the 1970s was to make the best of a good thing—and General Foods had plenty of good things to work with. It is the biggest coffee company in the U.S. and is strong in other markets from powdered drinks to cereals (see the chart on page 95). Ferguson, who became chief executive officer nine years ago at 47 and who views the world with the impassive expression and narrowed eyes of a poker player, maximized profits by cutting costs to build margins. The policy worked. Earnings per share more than doubled between 1973 and 1979 to $4.65.

RESEARCH ASSOCIATE: *Monci Jo Williams*

grape
-nuts
LOG
CABIN
Entenm

Awakened *to new growth opportunities, General Foods has added Oscar Mayer meats and Entenmann's baked goods to its menu of packaged edibles.*

By 1980 that policy had gone stale. General Foods found itself confined within the growth rate of the overall market for food, which expands with the population at about 1% a year. At best, General Foods could look forward to a 2% annual increase in volume. Sales of some kinds of foods were increasing faster—poultry, fish, natural fruit juices, frozen entrées, cheese, yogurt, fresh baked goods, low-calorie soft drinks—but as it happened, General Foods wasn't in any of these categories. On the other hand, per capita coffee consumption peaked in the U.S. back in 1962 and coffee is General Foods' biggest source of cash. It accounted for 31% of the company's sales and 22% of the operating profits in 1982.

During the years of maximizing profits, General Foods did, of course, look for ways of expanding. The results can be seen by comparing the 1981 and 1982 annual reports. The 1981 report spoke of the "growth opportunity" in Burger Chef and the other restaurant chains the corporation owned. The report also featured several new products: Sun Apple, an artificial juice; Crispy Cookin' French Fries; and Lean Strips, a bacon substitute made of soy and dried egg whites. The 1982 report didn't mention any of these three new products. All had flopped. Burger Chef had been sold and the report said management was "dealing decisively" with other "low-return businesses." General Foods is about to sell the other restaurants.

EVEN BEFORE these problems surfaced so obviously, General Foods had started to turn its great bulk toward a new course. Top management began developing a plan late in 1980 and by the time it was presented to the board of directors in February 1982, major elements of it were already in place.

Merrill Lynch's food industry analyst, William F. Maguire, has described the switch in strategy concisely: "From margin protection to volume building." The company's managers were told to raise unit volume by an average of 3% to 5% a year, instead of the 1% of recent years, and achieve a 15% return on capital, instead of the 13.2% return of fiscal 1982. The plan requires the company to be tougher in getting rid of subsidiaries, products, and people who aren't performing. To make the break with the past clear, General Foods took a $1.20-per-share write-off to sell or fix poor businesses last April, at the end of its 1982 fiscal year.

The goals are ordinary enough. It is in the details that the plan becomes interesting. Take the new acquisition policy. Instead of buying companies almost at random in industries it knows nothing about, General Foods is buying growing food companies that fill conspicuous holes in its menu. The purchase of Oscar Mayer for $469 million in 1981 put General Foods into the processed-meat business in a big way, with a company growing at an annual rate of 5%. What added to General Foods' interest was Oscar Mayer's ownership of Louis Rich, a processed-turkey company growing at an 11% clip. General Foods now sees itself poised to move with the consumer trend away from red meats and toward poultry. Turkey is especially attractive:

being a bigger bird than a chicken, it yields more meat for the same amount of processing labor and hence more profit. So today 13.5 million turkeys are gobbling their way toward the slaughterhouse to become smoked turkey breasts, turkey frankfurters, turkey salami, turkey bologna, turkey pastrami, and turkey ham for General Foods.

Robert L. Seelert

The wisdom of the Oscar Mayer purchase was not accepted at first on Wall Street. Meat is a volatile business, said the analysts, and makes the company more vulnerable to commodity price swings. That's true of fresh meat, not processed meat, replied the company. General Foods paid 12 times earnings for Oscar Mayer, the analysts complained, when General Foods was selling for only seven times earnings. Profits would be diluted. That might be true but only in the short term, General Foods replied.

The facts bore out the company. As Ferguson observed recently, Oscar Mayer's earnings grew so briskly in the first year with General Foods that there was no dilution. Since the acquisition costs are fixed, all further earnings gains will be turkey gravy.

When General Foods announced the purchase of Entenmann's from Warner-Lambert Co. for $315 million—15.8 times earnings—Wall Street was ready to see the wisdom. Entenmann's purveys tasty doughnuts, coffee cakes, and other fresh goods from bakeries in Long Island, Miami, and Chicago. Its growth is as fast as Oscar Mayer's, 5% a year. Entenmann's now covers 36% of the U.S. population, but with General Foods' help it can double its potential markets.

ENTENMANN'S and Oscar Mayer give General Foods access to two new segments of the supermarket business, each with its own sales and distribution force. The packaged goods that General Foods makes are shipped off to distributors who sell to the supermarkets. But Entenmann's 800 trucks deliver fresh baked goods daily to most stores and pick up the stale coffee cakes and doughnuts. As General Foods points out, the same store delivery system can be used for breads, cookies, and fresh snacks. With Oscar Mayer, General Foods acquired a national system for delivering refrigerated items to refrigerated display cases, a system that could handle dairy and other products.

Oscar Mayer added about one percentage point to General Foods' annual growth rate and Entenmann's about half a point. So the company now has a base growth rate of 2½% to 3½% instead of 1% to 2%. That's an improvement but still short of the 5% goal. Though General Foods won't make any more acquisitions while the first two are being digested, says Ferguson, "we'll have to find another track or two to run around" to close the gap. The company "is a real cash machine and we can rebuild our base quickly," he adds. But the job still won't be easy. One of the handicaps of being as big as General Foods is that it's hard to find any new activity that will make much difference to the total company. When it's back in the market for acquisitions, General Foods will be looking for companies with potential revenues of at least $150 million to $200 million, even if they start out much smaller than that.

WHILE GENERAL FOODS looks for new opportunities, the basic businesses—coffee, desserts, cereals, powdered drinks, frozen vegetables, stuffings, dressings, and pet foods—are also being asked to make their contribution to growth. Edward Meyer, president of Grey Advertising Inc., one of the six agencies that handle General Foods' $500 million of advertising annually, explains how old brand names are being revived. Grape-Nuts has been around since 1898 and Raisin Bran since 1942. They are well established, healthful cereals but they needed a boost because they hadn't been promoted to consumers newly concerned about nutrition. Raisins are healthy and good, so last year General Foods' Post Cereals added Raisin Grape-Nuts to its line. It is a success. Then Post Cereals threw in everything chewy, wholesome, and tasty sounding that it could put together in one cereal to create a breakfast mouthful: Honey Nut Crunch Raisin Bran. The company expects sales of these two and a third new cereal, Fruit & Fibre, to total $95 million a year.

Jell-O, another solid old brand, has been around since 1897. But gelatin is losing ground as a dessert because, according to General Foods, the three to four hours it takes Jell-O to set is more than today's consumer wants to wait. "She," as General Foods persists in calling its customers, is apparently not satisfied with foods that are merely easy to prepare but wants them ready-to-eat—as well as more healthful. So General Foods put together the venerable name of Jell-O and the wholesomeness the consumer perceives in pudding, froze it to create an instant food, and called the result frozen Jell-O Pudding Pops. For its efforts to combine the right emulsifiers, oils, smoothers, and thickeners to give frozen milk pudding on the end of a stick the right taste, texture, and durability, General Foods has been well rewarded. Pudding Pops promises to be a $100-million-a-year product. Now being tested: frozen gelatin on a stick.

Coffee has also been a slow-growth business, but General Foods has persevered. While fighting off Procter & Gamble's invasion of the market during the past decade without losing any share, General Foods also survived price disruptions caused by the frosts in Brazil in the mid-1970s that boosted the price of beans 550% in two years. "The analysts worry too much about our coffee business," says Ferguson. "It's a hell of a business, in good times and bad times."

Still, as Ferguson admits, "it is hard to get earnings growth" from coffee. To get that growth—to get Americans to drink more rather than less coffee—General Foods has changed its advertising. Since young people are resisting coffee, the aging Robert Young has been retired as a spokesman for Sanka, and quarrelsome Cora has been replaced by scenes of people enjoying Maxwell House coffee while Ray Charles croons about that "good-to-the-last-drop feeling." General Foods has successfully introduced new coffees—Maxwell House Master Blend, which gets more coffee out of the same weight of beans, for one.

General Foods plans to profit from the popularity of diet drinks by marketing Kool-Aid with aspartame, the low-calorie sweetener without the unpleasant aftertaste. When aspartame-sweetened Kool-Aid goes national in 1984 along with another drink, Crystal Light, General Foods expects each product to be in the $100-million-a-year class.

Ervin R. Shames

Only General Foods' pet food division has deliberately shrunk. General Foods lost money on it in fiscal 1981 and 1982; the company has cut staff and funds sharply, concentrating on the so-called soft-moist dog foods that have been its more profitable lines, and will make a profit in fiscal 1983.

General Foods' overstuffed overhead is a major target of the strategic plan. The company has proportionately higher selling, general, and administrative costs than any of its major competitors. SGA expenses amounted to 32% of sales in fiscal 1981, compared with 28.5% for the next highest, General Mills, and 12.9% for the lowest, Ralston-Purina.

The high expense ratio may be explained partly by more intensive advertising and pro-

PHOTOGRAPHS BY MARIANNE BARCELONA

motion, but only partly. To cut into the remainder of that overhead, General Foods is reducing the company payrolls. Through attrition and dismissals, the work force has been cut 6.2% so far in fiscal 1983 and another 2% may go before the year ends in April. If so, General Foods will have cut its total work force from about 43,000 to a bit less than 40,000. (The figures are about equally divided between U.S. and overseas employees and do not include people working for Oscar Mayer, Entenmann's, or the restaurants that are being sold.)

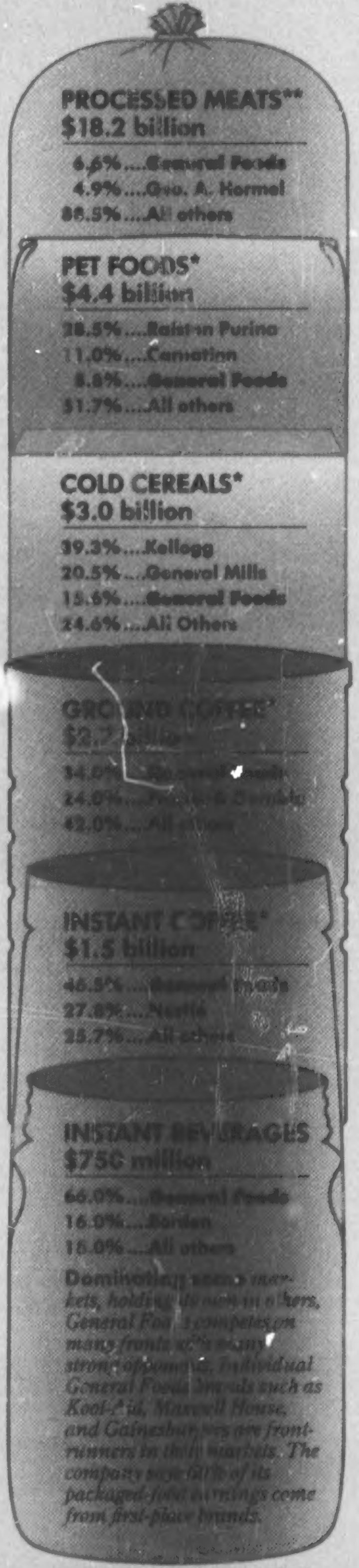
International operations are particularly ripe for trimming, since they account for 25% of the company's sales but only 17% of the profits. Of the $1.20-a-share write-off announced last April, 78 cents will be assigned to overseas operations destined for cutting in the next few months. In addition, since the company intends to grow more by acquiring new businesses than by developing new products, corporate research is being cut by 6% to 7% in real dollars. The company is abandoning its effort to turn soybeans into passable imitations of various table favorites. Judging by the reaction to Lean Strips, the public isn't ready for soy food.

A NEW STYLE of management is seeping in with the new strategy. After nine years as chief executive, Ferguson, at 56, remains in charge. Indeed, he is the instigator of the new policy. But in 1981 a strong new figure emerged when Philip L. Smith, 49, was appointed president and chief operating officer. More popular in the company than the remote Ferguson, Smith is an informal, open sort of manager whose appointment was hailed inside the company. "One of the good guys won" was the reaction of corridor gossips.

Like most of top management, Smith is a marketing man; he started in the Maxwell House division in 1966. While Ferguson detaches himself from daily operations—he has been going up to Harvard lately for private seminars on subjects as far removed from Jell-O and Kool-Aid as genetic engineering and astrophysics—Smith is watching the operating divisions closely. "My focus is down into the organization," he says. "Jim brings me a goody like Entenmann's and now I have to deliver. This balance plays well to my skills." Smith spells out how other executives are expected to deliver from now on—he wants to see them develop good organizations, produce the company's required 15% return on capital, and above all bring good ideas to market. As an example of what he wants, he cites Master Blend coffee.

The man in charge of the coffee division when Master Blend was launched, Robert L. Seelert, 40, is one of the exceptional young managers who have risen to the next tier of the hierarchy below Smith, becoming conspicuous candidates for the top two jobs in the future. This tier was reorganized and shuffled in November, putting strong men in weak spots and rounding out their experience. Seelert was nicknamed by colleagues "the trainee chairman" soon after he arrived at General Foods from the Harvard Business School in 1966. He is everybody's all-American—boyish, attractive, amusing, popular, smart, and lucky. He had the good fortune to join the team marketing Tang just after the Apollo astronauts adopted it as their space beverage. General Foods sponsored TV coverage of Apollo missions, Tang sales doubled in two years, and Seelert's career took off at about the same pace. Having run the coffee division successfully, he has now been moved to another group that had less success lately in pushing its basic products. His "packaged convenience foods" division sells items such as desserts, stuffings, Minute rice, and Birds Eye frozen vegetables.

1981 Market Shares



Dominating some *markets, holding its own in others, General Foods competes on many fronts with many strong opponents. Individual General Foods brands such as Kool-Aid, Maxwell House, and Gainesburgers are front-runners in their markets. The company says 60% of its packaged-food earnings come from first-place brands.*

*SOURCE: LEHMAN BROTHERS KUHN LOEB INC.
**SOURCE: BUSINESS TREND ANALYSTS

General Foods observers name Ervin R. Shames, a 42-year-old who also came to the company from the Harvard Business School, as the other heir apparent to watch. A slight, scholarly-looking Iowan, Shames carries the considerable burden of running General Foods' international operations, with all the headaches of dealing with difficult governments, careening foreign currencies, and problems in distant places. He also has some opportunities. The consumption of coffee and fruit-flavored drinks is growing faster overseas than in the U.S., for instance.

IF SYMBOLS HELP, then General Foods will get help this spring when it moves into its new headquarters in Rye, New York. The $50-million building was designed by Kevin Roche John Dinkeloo Associates. With its gleaming white aluminum exterior and massive arms stretching out from a huge domed atrium in the center, the building looks like some creation for *Star Wars*. It could become quite a symbol, or quite a white elephant.

■ Executives pondering the merits of the revisionist line on the all-purpose manager—the increasingly popular notion that managers do best what they know best and should therefore stick to it—will want to take note of General Foods' new growth strategy. Critics are still easy to find, but the farsighted Warren Buffett is evidently not among them. Buffett is hanging on to his 2.6 million shares and is now collecting $2.40 a share in annual dividends, up 20 cents from last year. ■

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DEALS OF THE YEAR

CHRISTINA ONASSIS RIDES OUT THE TANKER STORMS

MCI VS. BELL; BAUSCH & LOMB VS. ITSELF

THE NEW TECHNOLOGY OF THE MIND

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JANUARY 24, 1983

FORTUNE

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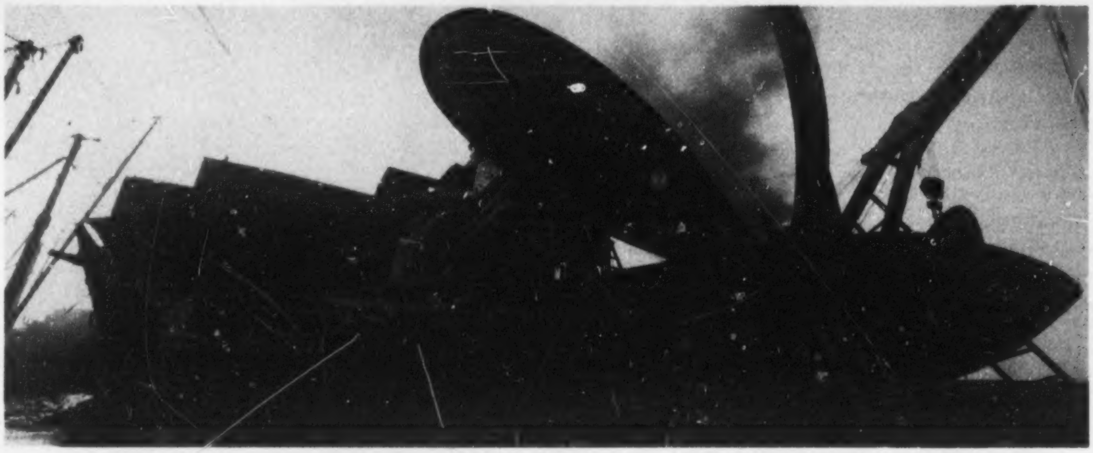

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FORTUNE

CHRISTINA ONASSIS RIDES OUT THE TANKER STORMS

SHIPPING/DAVID FAIRBANK WHITE

■ Not long past noon on March 15, 1975, upon the death of her father in Paris, a spoiled young jet-setter named Christina Onassis became one of shipping's most important executives in the early days of the industry's longest and deepest recession. She has sent many of her father's proud vessels to the scrapyard since then, but her fleet is emerging in surprisingly good shape, more durable and competitive than many of its rivals.

She is far from being the richest woman in the world, as she is sometimes billed, but she's not headed for the poorhouse either. Olympic Maritime S.A., the company that Aristotle Socrates Onassis built, has a solid core of ten tankers on long-term charter to major oil companies. They throw off a reliable stream of cash flow—the envy of weaker companies—and Olympic has used the cash plus new debt to modernize and upgrade its fleet, something few competitors have been willing and able to do. The Onassis fleet has shrunk from 56 ships in 1975 to 38 today, of which 14 are listed as laid up. Still, Olympic ranks as the world's eighth-largest independent tanker owner (see table, page 45).

AGENCE ANGELI

Chryso Mou, *"my golden one," is the affectionate nickname that Aristotle Onassis gave his daughter, Christina. He left her 48% of his shipping interests.*

OLYMPIC MARITIME has also put together a new management team in which Christina plays a somewhat murky role. Luckily for her and the company, Onassis was survived by some able longtime associates, in particular Constantine Gratsos, who died in 1981 at age 79. In 1977 Gratsos, Christina, and the others tapped one of the most respected men in shipping for the post of managing director. He is Louis Anderson, 53, a Greek-American who made his name as Exxon's head of tanker chartering. "He's mercurial—he's a Greek," says a former colleague. "He has an entrepreneurial side and likes to horse-trade. He ran his end of the business"—the largest chartering operation in the world—"the way the Greeks ran theirs."

Anderson and other Olympic executives are well qualified to give Christina a postgraduate course in shipping, continuing a rather haphazard education that briefly included Miss Hewitt's Classes in New York. While her father was still alive she put in stints as a trainee in his offices around the world and at shipping firms in New York. Though impulsive in romance—at 32 she has gone through three marriages and a succession of suitors—she is cautious in business.

The organizational structure is curious. Like most shipping firms, Onassis's was a skein of interlocking corporations and holding companies registered in many countries. He left Christina a 48% interest and an annual allowance of $250,000 (indexed for inflation), but vested control of the business in a foundation named after his son, Alexander, killed in a 1973 airplane crash. Christina sits on the foun-

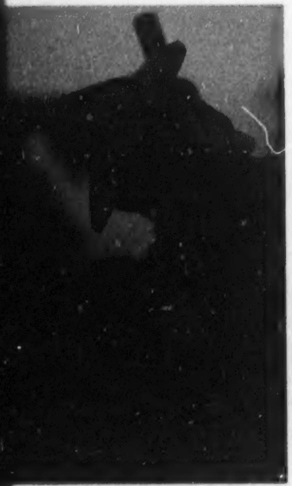
The last voyage *for this freighter (right) ends on Godani beach in Pakistan, where native workers help haul the vessel out of the water. The hulk will be cut up and sold for scrap. Some 27 million tons of shipping disappeared in the first 11 months of 1982. Olympic Maritime, the Onassis company, has broken up 11 supertankers since 1975.*

PHOTOGRAPH BY TOM SENNETT

dation's board with Olympic executives, Onassis relatives, and her father's cronies. Ari's widow, Jacqueline, who settled with his estate in 1977 for $26 million, has no share in the business and no role in the foundation.

Theoretically, the board members could outvote Christina, but she is the only one among them who is a stockholder in the Onassis enterprises, and apparently they defer to her wishes as loyally as they did to Ari's. Aides and employees speak of her much as they did of her father, with a mixture of awe and fear. When she is off playing in St. Moritz or Paris or London, Anderson keeps in close touch.

By the time Onassis died of a gradual paralysis called myasthenia gravis, compounded by pneumonia, his fleet was already in rough seas. For most of his career Onassis was, despite his flamboyance, a conservative shipowner who chartered vessels long term to oil companies before the ships came down the ways. But when inflation soured the take on some long-term charters, he committed his free tankers to the spot market in shipping's greatest year, 1973. A very large crude carrier (VLCC) of 200,000 tons or more, which costs perhaps $50 million to build, could bring in over $15 million on one trip from the Persian Gulf to Rotterdam.



Little more *than a propeller remains (right) of a ship being cut up at a Taiwan scrapyard, where the workman above wields an acetylene torch. It takes about six weeks for a supertanker that may have cost $50 million to be reduced to $3 million of scrap.*

ARI IS SAID to have pocketed $100 million in profits that year and plunged by ordering six more supertankers worth $360 million from French and Japanese yards. Other shippers were gambling just as recklessly (see "Betting $20 Billion in the Tanker Game," FORTUNE, August 1974). But soaring oil prices and falling consumption knocked the shipping industry into a depression from which it still hasn't recovered.

Today, nine punishing years later, more than a third of the world's 347 million deadweight tons of tanker capacity is unwanted excess. From Scandinavia to Greece to Southeast Asia, bays and fjords are filling up as ships come off time charter and fall into layup. Nearly 17% of the tanker supply, or 58 million tons, is now mothballed.

If owners care to gamble, they can pay the $4 million a year that it costs to keep a supertanker cruising in search of cargo. At any given time as

PHOTOGRAPHS BY TOM SENNETT

HARRY GRUYAERT—MAGNUM

BILL RAY

Overlooking *the Monte Carlo harbor, this graceful building (top) is where Olympic Maritime is run. Ari Onassis (above) kept an apartment on the top floor. Now it is Christina's.*

many as 40 supertankers are waiting in the Persian Gulf. Other hobo ships hover off Venezuela, off Nigeria, off the big Caribbean refineries that feed the U.S. market. Some are being used as floating tank farms. Dry-cargo ships are faring little better, with 21 million tons, or 10% of total capacity, laid up.

Most threatened of all by changing times are the gargantuan VLCCs, which have passed their day of greatest use. Only smaller tankers with shallow drafts are able to service many of the so-called local oil fields, such as the North Sea, Mexico's Bay of Campeche, and offshore California. "It seems that everybody is finding oil at their doorstep," says C. Y. Chen, a leading shipowner. Shipments to the U.S. from Persian Gulf states have fallen by half in five years. Much of this oil now moves through three pipelines to the Mediterranean or through the Suez Canal, reopened in 1975 for tankers of up to 150,000 tons.

Some great fleets are sailing toward oblivion. Daniel K. Ludwig, an American shipowner once in the Onassis league, has let his 54 ships dwindle to 17 since 1975. Ari's special rival, the Niarchos Group, owns only 33 ships, less than half the peak number. Neither Ludwig nor the Niarchos Group is among today's top ten independent tanker owners. In recent years the last melancholy journey for many behemoths of the seas—as well as older, smaller vessels that aren't fuel efficient—has been to scrapyards in Taiwan, Pakistan, and elsewhere.

Olympic Maritime seems to have come through these wrenching times in better shape than others. Sniffing the changing winds—he was always good at that—Onassis started the turnaround in his last year, reportedly paying a painful $17 million to cancel contracts for three of the six supertankers he had impulsively ordered. The swing back to more customary Onassis conservatism continued under Christina. The other three big ships were too far along to be stopped, but after the 270,000-ton *Olympic Breeze* slid into the gentle waters off Yokohama in 1976, it was chartered to Mobil Oil. The rate was so low it would have made Ari whip out his large handkerchief and wipe his brow—a gesture he was famous for—but at least the charter covered operating costs.

THE SECOND of the new ships, the $35-million *Olympic Bravery*, ran aground on its maiden voyage, but Ari's heirs reportedly recovered $50 million from insurance. They next found a charter for the *Alexander S. Onassis*, the last of the big burdens coming down the slips.

In an imaginative deal, Olympic then bought a new VLCC from Ludwig for $26.5 million, naming it the *Aristotle S. Onassis*, and paid Texaco $21 million for two old and inefficient VLCCs, which soon went to the knackers. In the final step, Texaco signed a long-term charter for both the *Alexander* and the *Aristotle*. In essence, Olympic took a loss up front in return for profits down the road, while Texaco shed the operating costs of two fuel-guzzling old tankers.

ANDERSON, presumably with Christina's blessings, has been brutal in scrapping losers. Eleven supertankers have gone to the junkyard, six of them in the past two years. Four more are laid up and may not have long to live. Meanwhile, maritime sources say that Olympic has bought four additional dry-cargo ships—for a total of 15—and five fuel-efficient medium tankers, ranging from 82,000 to 113,000 tons, a handy size for the Bay of Campeche or the Suez run. Two of the new cargo ships (and two older ones) are listed as being laid up, but the new tankers are paying off. Three are on charter to Shell and the other two, just off charter to Pemex, the Mexican oil company, are active in the spot market.

Just how much money this secretive company earns overall requires some educated guesswork. But the striking fact that emerges, after considerable allowance for error, is that the fabled Onassis empire is actually small potatoes among the world's great enterprises. Olympic may be earning $15 million to $20 million a year on a net worth of no more than $160 million.

The most important earners are the six VLCCs on charter to oil companies. Some of the charters were signed at low rates, but the six together, according to estimates by experienced tanker brokers and owners, are probably bringing home operating profits of some $25 million a year. Seven smaller tankers should be chipping in $4 million, and the 11 dry-cargo vessels still plying the seas $3 million.

Mothball charges on the 14 vessels that have been laid up could total some $2 million a year, but the big expense is the cost of debt. Like real estate operators, shipowners are heavily leveraged. Luckily for journalists, bankers, and insurance companies, maritime authorities require reasonably accurate reporting of the debt a ship is carrying, along with its cargo.

After a search through registries from Piraeus to Panama, the total debt FORTUNE came up with for Olympic was at least $130 million. Weighing the value of the long-term charters, shipbrokers say the Olympic tonnage is worth around $200 million. We tried these numbers on Lester D. Anderson Jr., vice president for ship lending at Chemical Bank, which doesn't have Olympic as a customer. "Is it a balance that one as a lender would create right now?" he asks. "I don't think so. But being in existence, would it be a situation where you felt compelled to bail out? I don't think so either. It's not a buy or a sell but a hold."

Tops in tankers

Owners	Carrying capacity*	Total tankers	VLCCs	VLCCs on long charter
Y.K. Pao	10.3	58	37	25
Japan Line	5.8	28	22	7
C.Y. Tung	5.6	41	18	11
Nippon Yusen Kaisha	5.3	45	14	5
Bergesen	5.2	25	14	6
A.P. Møller	4.5	31	11	1
Overseas Shipholding	4.4	42	8	8
Olympic Maritime (Onassis)	3.6	26	10	6
Kawasaki Kisen	3.1	29	6	1
Livanos Group	2.8	13	8	0

***Millions of tons** Source: Drewry Shipping Consultants and Johan G. Olsen, shipbrokers

There's plenty *of heft left in the Onassis fleet. Olympic Maritime weighs in as the world's eighth-largest independent tanker owner, measured by deadweight tonnage. Exxon owns the biggest tanker fleet of all, more than 150 ships, but major oil companies don't risk a complete cutoff of cargoes, as the independent operators do. VLCCs, supertankers of 200,000 tons or more, on charters of a year or more provide a stream of assured revenues. Overseas Shipholding, the largest American independent, does well in this respect. It has eight out of eight VLCCs on long charters.*

Some $86 million of the outstanding debt is held by Citibank. Back in the 1950s, Walter Wriston was a loan officer in Citibank's shipping department and financed Ari's construction of what was then the world's biggest supertanker. As Citicorp's chairman, he keeps in his office a scale model of an Onassis ship. Most of the rest of the debt is owed to Britain's Midland Bank, which is in for $27 million.

The bulk of the $130-million debt is in demand notes, callable at any time. Floating rates on such loans to shipowners have been running around 14%. Allowing for repayment on other, more conventional mortgages, FORTUNE estimates annual debt-service charges of about $20 million.

There are plenty of other assets out there to help meet the bills. Ari always kept healthy cash reserves; after some tedious arithmetic, FORTUNE guessed that they totaled $50 million when he died (see "The Reality Behind the Onassis Myth," October 1975). Assuming those reserves are still around and sensibly invested, they're bringing in perhaps $6 million a year. Another sizable asset is Olympic Tower, a Fifth Avenue skyscraper in Manhattan that now looks like one of Ari's more fruitful speculations. Its value has doubled during the New York office boom. More than half of it has been sold off as high-priced condominiums, but the Onassis share of what's left may be worth $40 million.

Much depends on when shipping emerges from depression. If the scrappage of vessels continues at the present rate and world oil consumption stays steady, the tanker market should be back in balance by 1987. Olympic's big moneymakers will be coming off charter as the decade proceeds. Its net worth could soar or shrink, depending on the timing of the recovery.

■ World trade doesn't depend, of course, on the success or failure of Olympic Maritime. It isn't big or important enough to get anywhere near FORTUNE's list of the largest transportation companies. But all of us must gamble in small ways or large and so are fascinated by high rollers. Ari was one and his daughter looks like another. One of Ari's oldest associates, recently retired, predicts: "She'll stay in shipping." She named her two newest and proudest vessels for her dead brother and dead father. She would probably sell her islands, her yacht, even her Saint Laurents and Givenchys before sending such ships to the beaches of Pakistan. ■

DIRECTORY/ROBERT STEYER

DEALS OF THE YEAR

■ Measured in dollars, the 50 biggest transactions of 1982 did not quite match the previous year's: $48.2 billion in total value, compared with $49.9 billion in 1981. But tumultuous takeovers made 1982 as hostile a year as its predecessor. Pac-Man—in which the prey tries to devour the hunter—became as familiar in the boardroom as in video game arcades.

Financial intermediaries prospered amid the combat. They earned $220.5 million for engineering 33 mergers and acquisitions and for underwriting 17 debt and equity offerings, collecting a median fee of $3.8 million, compared with $2.5 million in 1981. First Boston finished first among investment bankers in billing clients for mergers and acquisitions; it collected $38.4 million. Goldman Sachs was second with $34.9 million.

The notes on page 52 explain which deals qualify for FORTUNE's annual directory of the biggest transactions. Some big ones, such as Xerox's $1.6-billion purchase of Crum & Forster, did not make the list because they have been delayed by regulatory agencies. The most famous, or notorious, deal of 1982 was the four-cornered fight among Bendix, Martin Marietta, Allied, and United Technologies, so complicated that it made the top 50 three times. The $1.8 billion that Allied paid for Bendix was the fourth-largest amount spent on a single deal. Before it could go through, tender offers by Bendix and Martin Marietta for each other (No. 11 and No. 19) had to be untangled.

Public dismay over the Allied-Bendix melee led to an outcry for more federal legislation to control mergers. Editorial pages resounded with concern, although no compelling argument, that such battles damage the economy. The furor obscured other developments in the mergers and acquisitions game, including the disappearance of a phenomenon that had many Americans wringing their hands the year before: the foreign takeover of U.S. companies. In 1981 a dozen top deals were foreign acquisitions. But as the dollar strengthened and U.S. companies became more expensive, foreign shoppers lost interest. Only one overseas consumer made the list in 1982. British financier Sir James Goldsmith completed his purchase of Diamond International (No. 50).

OIL AND GAS DEALS accounted for the most acquisitions (seven), but played a smaller role than in 1981, when they resulted in 13 purchases. The largest 1982 deal, moreover, began in 1981 when Mobil tried to take over Marathon Oil and U.S. Steel entered as a white knight.

Companies such as Occidental Petroleum, which bought Cities Service (No. 2), and Du Pont, whose 1981 purchase of Conoco was the largest in U.S. history, are now shedding assets to help pay the cost. Although natural resource deals are less attractive than they were in 1981, asset selling has created a subtrend as smaller companies pick up fossil fuel morsels cast aside by the giants. Petro-Lewis, a rapidly expanding Denver-based oil and gas exploration company, made the list twice. It purchased some of Conoco's properties (No. 26), as well as some owned by Placid Oil and the Hunt family (No. 49).

Divestitures are rising throughout industry and for a variety of reasons: debt reduction, changes in corporate strategy, and defense against takeovers. "Divestitures are no longer just kicking out turkeys," says Stephen Friedman, a partner in Goldman Sachs. "There is no stigma to selling an attractive division if you have a better use for the funds."

Last year's nimblest divestiture was Brunswick's selling of its Sherwood Medical Group to American Home Products (No. 46). Brunswick, trying to avoid a takeover by Whittaker, made an arrangement by which American Home bought two-thirds of Brunswick's common stock and then swapped the securities for Sherwood, the "crown jewel" that had caught Whittaker's eye.

Forecasting what will happen in 1983, merger specialists say that 1982 may have marked a high (or low) point in unfriendly takeover efforts. "Hostile transactions have become accepted strategy, but the Bendix affair had so many convoluted maneuvers that boards of directors are likely to be more cautious this year," says W. Richard Bingham, managing director of Lehman Brothers Kuhn Loeb. More important, because of higher stock prices predators will find fewer undervalued companies to pounce upon.

The experts anticipate fewer multibillion-dollar blockbusters and they doubt aggregate values of the top 50 will reach 1981's heights. Divestitures for asset redeployment will increase, the experts say, and so will the number of leveraged buyouts and the inclination of financial service companies, insurance firms, and banks to combine.

PHOTOGRAPHS BY ROBERTO BROSAN

BIGGEST DEALS OF 1982

☐ **MERGERS AND ACQUISITIONS** ▨ **DEBT AND EQUITY OFFERINGS**

Rank	Value of deal (000)	Percent of book value	Transaction	Companies	Financial intermediaries	Fee (000)	Fee as percent of deal
1	**U.S. STEEL, steel, acquires MARATHON OIL, oil and gas**						
	$5,964,073	289%	Acquisition for cash and notes, 3/11	U.S. Steel	Goldman Sachs	$10,000	.17%
				Marathon Oil	First Boston	$17,400	.29%
2	**OCCIDENTAL PETROLEUM, oil and gas, acquires CITIES SERVICE, oil and gas**						
	$4,024,877	196%	Acquisition for cash, notes, and preferred stock, 12/3	Occidental Petroleum	Goldman Sachs Donaldson Lufkin & Jenrette	$5,000 $1,000	.12% .02%
				Cities Services	First Boston Lehman Brothers Kuhn Loeb	$6,063 $6,063	.15% .15%
3	**CONNECTICUT GENERAL, insurance, merges with INA, insurance**						
	$1,936,488[1]	93%	Merger by exchange of common stock to form CIGNA, 3/31	Connecticut General	Goldman Sachs Lazard Frères	$2,500 $1,000	.13% .05%
				INA	Goldman Sachs Lehman Brothers Kuhn Loeb	$2,500 $1,000	.13% .05%
4	**ALLIED, oil, gas, and chemicals, acquires BENDIX, automotive products**						
	$1,815,500[e]	123%[e]	Acquisition for preferred and common stock and notes[2]	Allied	Lehman Brothers Kuhn Loeb	$5,000	.28%[e]
				Bendix	First Boston	$2,750	.15%[e]
5	**AMERICAN GENERAL, insurance, acquires NLT, insurance**						
	$1,538,367	121%	Acquisition of 91.5% for cash, notes, preferred stock, and convertible debentures, 11/4[3]	American General	First Boston	$5,000	.33%
				NLT	Morgan Stanley	$5,700	.37%
6	**FEDERAL NATIONAL MORTGAGE ASSOCIATION, mortgage holder, sells debentures**						
	$1,500,000		Offering of 15% debentures due 1983, 7/12	Federal National Mortgage Association	Various dealers	$1,364	.09%
7	**R.J. REYNOLDS, tobacco and food products, acquires HEUBLEIN, distilling**						
	$1,367,440	222%	Acquisition for cash, common and preferred stock, 10/12	R.J. Reynolds	Dillon Read	$2,800	.20%
				Heublein	Goldman Sachs	$4,600	.34%
8	**NORFOLK & WESTERN RAILWAY, railroad, merges with SOUTHERN RAILWAY, railroad**						
	$1,357,898[4]	93%	Merger by exchange of common stock to form Norfolk Southern Corp., 6/1	Norfolk & Western	Dillon Read	$550	.04%
				Southern	Morgan Stanley	$750	.06%
9	**UNION PACIFIC, oil, gas, and railroad, acquires MISSOURI PACIFIC, railroad**						
	$1,170,113	103%	Acquisition for common and preferred stock, 12/22	Union Pacific	First Boston	$1,200	.10%
				Missouri Pacific	Printon Kane Research Dillon Read	$350 $450	.03% .04%
10	**BALDWIN-UNITED, financial services, acquires MGIC INVESTMENT, insurance and real estate**						
	$1,160,885	215%	Acquisition of 98% for cash, 3/9[5]	Baldwin-United	Merrill Lynch White Weld MacDonald & Co.	NA $1,000[6]	NA .09%
				MGIC Investment	Goldman Sachs	$2,947	.25%
11	**BENDIX, automotive products, makes tender offer for MARTIN MARIETTA, aerospace systems**						
	$1,149,600	142%	Cash tender for 67%, 9/20 [7,8]	Bendix	Salomon Brothers First Boston	$2,994 $2,750	.26% .24%
				Martin Marietta	Kidder Peabody	See footnote[9]	
12	**AMERICAN TELEPHONE & TELEGRAPH, telecommunications, sells stock**						
	$1,062,000	87%	Offering of 17.7 million shares of common stock at $60, 12/1	AT&T	Morgan Stanley*, Blyth Eastman Paine Webber, First Boston, Merrill Lynch White Weld, Salomon Brothers	$23,895	2.3%
13	**SMITHKLINE, pharmaceuticals, acquires BECKMAN INSTRUMENTS, medical instruments**						
	$1,009,927	310%	Acquisition for common stock to form SmithKline Beckman, 3/4	SmithKline	Merrill Lynch White Weld	$1,500	.15%
				Beckman Instruments	Blyth Eastman Paine Webber	$300	.03%
14	**FEDERAL NATIONAL MORTGAGE ASSOCIATION, mortgage holder, sells debentures**						
	$1,000,000		Offering of 15.05% debentures due 1984, 1/11	Federal National Mortgage Association	Various dealers	$1,380	.14%

NA Not available. [e] FORTUNE estimate. *Lead manager. [1] Valued as if INA were the acquired firm. [2] In acquiring Bendix, Allied also gets 39% of Martin Marietta common stock. [3] American General had previously purchased 8.5%. [4] Valued as if Southern Railway were the acquired firm. [5] Baldwin-United had previously purchased 2%. [6] Fee in litigation. [7] Bendix had previously purchased 5%. [8] In being acquired by Allied, Bendix swapped 19.1 million shares of its holding of Martin Marietta common stock for Martin Marietta's holding of 11.9 million shares of Bendix common. [9] Fee included in Martin Marietta's cash tender for Bendix (Deal No. 19).

BIGGEST DEALS OF 1982

Rank	Value of deal (000)	Percent of book value	Transaction	Companies	Financial Intermediaries	Fee (000)	Fee as percent of deal
	FEDERAL NATIONAL MORTGAGE ASSOCIATION, mortgage holder, sells debentures						
	$1,000,000		Offering of 15.65% debentures due 1985, 2/10	Federal National Mortgage Association	Various dealers	$1,708	.17%
	FEDERAL NATIONAL MORTGAGE ASSOCIATION, mortgage holder, sells debentures						
	$1,000,000		Offering of 14.9% debentures due 1985, 3/10	Federal National Mortgage Association	Various dealers	$1,575	.16%
	FEDERAL NATIONAL MORTGAGE ASSOCIATION, mortgage holder, sells debentures						
	$1,000,000		Offering of 15% debentures due 1985, 4/12	Federal National Mortgage Association	Various dealers	$1,402	.14%
	FEDERAL NATIONAL MORTGAGE ASSOCIATION, mortgage holder, sells debentures						
	$1,000,000		Offering of 14.63% debentures due 1986, 6/10	Federal National Mortgage Association	Various dealers	$1,680	.17%
19	**MARTIN MARIETTA, aerospace systems, makes tender offer for BENDIX, automotive products**						
	$892,500	119%	Cash tender for 50%, 10/1[10]	Martin Marietta	Kidder Peabody	$5,900[e]	.66%[e]
				Bendix	Salomon Brothers First Boston	See footnote[11] See footnote[11]	
20	**FEDERAL NATIONAL MORTGAGE ASSOCIATION, mortgage holder, sells debentures**						
	$800,000		Offering of 14.45% debentures due 1987, 8/13	Federal National Mortgage Association	Various dealers	$1,600	.20%
	FEDERAL NATIONAL MORTGAGE ASSOCIATION, mortgage holder, sells debentures						
	$800,000		Offering of 11.35% debentures due 1984, 10/12	Federal National Mortgage Association	Various dealers	$762	.10%
	FEDERAL NATIONAL MORTGAGE ASSOCIATION, mortgage holder, sells debentures						
	$800,000		Offering of 10.85% debentures due 1987, 11/12	Federal National Mortgage Association	Various dealers	$1,600	.20%
	FEDERAL NATIONAL MORTGAGE ASSOCIATION, mortage holder, sells debentures						
	$800,000		Offering of 10.95% debentures due 1986, 12/10	Federal National Mortage Association	Various dealers	$1,330	.17%
24	**UNION TEXAS PETROLEUM [Allied], oil and gas, and FLORIDA EXPLORATION [Continental Group], oil and gas, acquire SUPRON ENERGY, oil and gas**						
	$764,545	849%	Acquisition for cash, 4/30	Union Texas	First Boston	$1,400	.18%
				Florida Exploration	First Boston Lazard Frères Donaldson Lufkin & Jenrette	$600 $300 $300	.08% .04% .04%
				Supron Energy	Kidder Peabody	$3,563	.47%
25	**COCA-COLA, soft drinks, acquires COLUMBIA PICTURES, motion pictures**						
	$748,192	408%	Acquisition for cash and common stock, 6/21	Coca-Cola	Morgan Stanley	$750	.10%
				Columbia Pictures	Allen & Co.	$3,500	.47%
26	**PETRO-LEWIS, oil and gas, acquires some oil and gas properties of CONOCO [Du Pont], oil and gas**						
	$715,789	NA	Acquisition for cash	Petro-Lewis	None	—	—
				Conoco	None	—	—
27	**AVON PRODUCTS, cosmetics and fragrances, acquires MALLINCKRODT, health care products and chemicals**						
	$697,342	239%	Acquisition for cash and common stock, 3/8	Avon Products	Blyth Eastman Paine Webber	$2,500	.36%
				Mallinckrodt	Morgan Stanley	$3,500	.50%
28	**BEATRICE FOODS, food products, acquires beverages division of NORTHWEST INDUSTRIES, metal manufacturing**						
	$600,000	236%	Acquisition for cash, 1/14	Beatrice Foods	Lazard Frères	NA	NA
				Northwest Industries	Salomon Brothers Goldman Sachs	NA NA	NA NA
29	**MORTON-NORWICH PRODUCTS, salt and household products, acquires THIOKOL, chemicals**						
	$573,010	217%	Acquisition for cash and common stock to form Morton Thiokol, 9/24	Morton-Norwich	Goldman Sachs Salomon Brothers	$1,500 $1,000	.26% .17%
				Thiokol	Goldman Sachs Lazard Frères	$1,500 $600	.26% .10%

NA Not available. [e] FORTUNE estimate. [10] In being acquired by Allied, Bendix swapped 19.1 million shares of its holding of Martin Marietta common stock for Martin Marietta's holding of 11.9 million shares of Bendix common. [11] Fee included in Bendix cash tender for Martin Marietta (Deal No. 11).

Rank	Value of deal (000)	Percent of book value	Transaction	Companies	Financial intermediaries	Fee (000)	Fee as percent of deal
30	**ANHEUSER-BUSCH, beer, acquires CAMPBELL TAGGART, bakery products**						
	$570,133	251%	Acquisition for cash and preferred stock, 11/2	Anheuser-Busch	Dillon Read	$1,500	.26%
				Campbell Taggart	Bear Stearns	$2,850	.50%
31	**RELIANCE FINANCIAL GROUP (owned by the Saul P. Steinberg family), insurance and computer leasing, acquires RELIANCE GROUP INC., insurance, and LEASCO, computer leasing**						
	$526,066	195%	Acquisition for preferred stock, cash, and debentures, 1/8[12]	Reliance Financial	None	—	—
				Reliance Group	Bear Stearns	$850	.16%
				Leasco	Bear Stearns	$150	.03%
32	**PRUDENTIAL, insurance, acquires interest in hotel-office complex owned jointly by MILLER-DAVIS CO., real estate, and URBAN INVESTMENT & DEVELOPMENT CO. (Aetna Life & Casualty), real estate**						
	$514,258	NA	Acquisition of 80% for cash and existing mortgages, 1/6	Prudential	NA	NA	NA
				Miller-Davis Co.	None	—	—
				Urban Investment	None	—	—
33	**STROH BREWERY, beer, acquires JOS. SCHLITZ BREWING, beer**						
	$500,837	159%	Acquisition for cash, 6/10	Stroh	Salomon Brothers	$2,300	.46%
				Jos. Schlitz	Goldman Sachs	$1,477	.29%
34	**FEDERAL NATIONAL MORTGAGE ASSOCIATION, mortgage holder, sells debentures**						
	$500,000		Offering of 14.3% debentures due 1987, 5/14	Federal National Mortgage Association	Various dealers	$1,000	.20%
	FEDERAL NATIONAL MORTGAGE ASSOCIATION, mortgage holder, sells debentures						
	$500,000		Offering of 15.25% debentures due 1987, 7/12	Federal National Mortgage Association	Various dealers	$976	.20%
	FEDERAL NATIONAL MORTGAGE ASSOCIATION, mortgage holder, sells debentures						
	$500,000		Offering of 14.3% debentures due 1986, 7/27	Federal National Mortgage Association	Various dealers	$875	.18%
	MOBIL ROCKY MOUNTAIN [Mobil Oil], oil and gas, acquires interest in some holdings of ANSCHUTZ CORP. (owned by Phillip F. Anschutz), oil, gas, and minerals						
	$500,000	NA	Acquisition for cash and notes, 8/1[1]	Mobil	NA	NA	NA
				Anschutz Corp.	None	—	—
	FEDERAL NATIONAL MORTGAGE ASSOCIATION, mortgage holder, sells debentures						
	$500,000		Offering of 13.25% debentures due 1986, 9/10	Federal National Mortgage Association	Various dealers	$858	.17%
	FEDERAL NATIONAL MORTGAGE ASSOCIATION, mortgage holder, sells debentures						
	$500,000		Offering of 11% debentures due 1988, 10/27	Federal National Mortgage Association	Various dealers	$1,125	.23%
40	**OUTDOOR ADVERTISING ASSOCIATES (limited partnership), billboard advertising, acquires some assets of FOSTER & KLEISER [Metromedia], billboard advertising**						
	$485,000	NA	Acquisition for cash and promissory note, 11/26	Outdoor Advertising Assoc.	Bear Stearns Karl Eller	$9,000° $250	1.9%° .05%
				Foster & Kleiser	Bear Stearns	$250	.05%
41	**WARNER-LAMBERT, health care products, acquires IMED, medical instruments**						
	$465,000	1284%	Acquisition for cash, 8/20	Warner-Lambert	First Boston	$2,250°	.48%°
				IMED	Lehman Brothers Kuhn Loeb	$3,700°	.80%°
42	**AMERICAN TELEPHONE & TELEGRAPH, telecommunications, sells stock**						
	$463,800	84%	Offering of 8 million shares of common stock at $58, 8/25	AT&T	Morgan Stanley*, First Boston, Goldman Sachs, Merrill Lynch White Weld, Salomon Brothers	$6,360	1.4%
43	**AETNA LIFE & CASUALTY, financial services, acquires GEOSOURCE, oil exploration equipment**						
	$446,087	237%	Acquisition of 71% for common stock, 7/1[13]	Aetna	Morgan Stanley	$2,965	.66%
				Geosource	Merrill Lynch White Weld	$1,500	.34%

NA Not available. °FORTUNE estimate. *Lead manager. [12] The Steinberg family had previously purchased 51% of Leasco common stock and 12% of Reliance Group Inc. common stock. Leasco had previously purchased 24% of Reliance Group Inc. common stock. [13] Aetna had previously purchased 29%.

51

BIGGEST DEALS OF 1982

Rank	Value of deal (000)	Percent of book value	Transaction	Companies	Financial intermediaries	Fee (000)	Fee as percent of deal
44	**JAMES RIVER, paper products, acquires some assets of the Dixie-Northern division of AMERICAN CAN, containers and packaging**						
	$432,721	122%	Aquisition for cash and preferred stock, 7/2	James River	Kidder Peabody	$4,200°	.97%°
				American Can	Morgan Stanley	NA	NA
45	**SIGNODE INDUSTRIES (private investors), metal products, acquires SIGNODE CORP., metal products**						
	$430,260	129%	Acquisition for cash (leveraged buyout), 8/30	Signode Industries	Merrill Lynch White Weld	$4,500	1.1%
				Signode Corp.	Goldman Sachs	$1,025	.24%
46	**AMERICAN HOME PRODUCTS, pharmaceuticals, acquires SHERWOOD MEDICAL GROUP [Brunswick], medical instruments**						
	$425,000	243%	Acquisition for cash of 67% of Brunswick common stock, 2/25, followed by swap of stock for ownership of Sherwood, 3/9	American Home	Goldman Sachs	$1,333	.31%
				Sherwood Medical	Lehman Brothers Kuhn Loeb Merrill Lynch White Weld Salomon Brothers	$1,563 $1,563 $1,563	.37% .37% .37%
47	**COCA-COLA, soft drinks, acquires ASSOCIATED COCA-COLA BOTTLING, soft drinks**						
	$417,549	335%	Acquisition for cash, 7/30	Coca-Cola	Morgan Stanley	$2,250	.54%
				Associated	None	—	—
48	**PACIFIC HOLDING (owned by David Murdock), consumer products and real estate, acquires CANNON MILLS, textiles**						
	$412,748	117%	Acquisition for cash, 3/30	Pacific Holding	None	—	—
				Cannon Mills	Goldman Sachs Dean Witter Reynolds	$500 $150	.12% .04%
49	**PETRO-LEWIS, oil and gas, acquires some oil and gas properties of PLACID OIL and of Hunt family members, oil and gas**						
	$411,791	NA	Acquisition for cash, 1/1	Petro-Lewis	None	—	—
				Placid Oil, Hunt family	None	—	—
50	**GENERAL ORIENTAL (indirectly controlled by Sir James Goldsmith), investments, acquires DIAMOND INTERNATIONAL, forest products**						
	$407,758	130%	Acquisition of 59% for cash, 12/3[14]	General Oriental	Drexel Burnham Lambert	$2,500	.61%
				Diamond International	Bear Stearns	$700	.17%

NA Not available. °FORTUNE estimate. *Lead manager. [14]General Oriental had previously purchased 41%.

EXPLANATORY NOTES

Deals eligible for the list include:

1. U.S. public offerings of securities (except short-term securities) by domestic and foreign corporations issued under a single prospectus or offering circular.
2. Cash tender offers by domestic corporations or by foreign corporations tendering in the U.S., including those of companies buying in their own stock.
3. Mergers or acquisitions in which the buyer and/or seller is a U.S. company (or part of one). To be eligible, offerings must be effective in 1982 and tender offers must have expired during the year. Mergers and acquisitions are eligible if legally closed during the year or, when not legally closed, if the prospective buyer has paid a portion of the purchase price in cash during the year.

The list excludes short-term financings and financings other than public offerings—such as bank borrowings and private placements.

When two companies merge through an exchange of stock to form a new company, the company whose stockholders received the largest share of the new company is treated as the buyer. When the buyer or seller is a subsidiary, the parent's name is given in brackets.

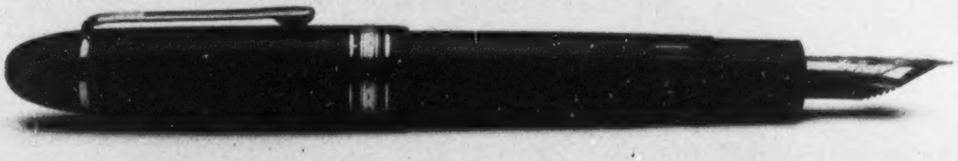
Value of deal Amounts for cash offerings are the total amounts raised; for tenders, the total amount paid. All securities issued in acquisitions or mergers are valued at the market price on the date of closing. If not closed, valuations are for December 17 (and those of new securities are estimated). Exception: when a new company is formed by merger, only those shares issued to stockholders of the smaller company are valued.

Percent of book value Book value calculations indicate the price paid (or amount of equity capital raised) per share as a percentage of the shareholders' equity per share of the acquired company (or issuer) at the end of the last quarter preceding the transaction.

Transaction Dates under this heading are effective dates for offerings, expiration dates for tenders, and closing dates for acquisitions and mergers. When no date is indicated, the deal has not closed.

Financial intermediaries For underwritten public offerings, the co-managers are listed and the lead manager is indicated by an asterisk. In the case of acquisitions and mergers, the intermediaries are typically investment banking firms that assisted in the transaction.

Fee The figures represent the amounts charged by the financial intermediaries assisting in the deals. In underwritings, part of the fee is paid to other members of the underwriting syndicate or to dealers other than the co-managers.



BROKERS/THOMAS MOORE

BALL TAKES BACHE AND RUNS WITH IT

■ "Average sucks," asserted George L. Ball, the 44-year-old president and new chief executive of Prudential-Bache Securities, introducing himself to his top 61 producers at a get-together last November in Phoenix. "Like Zeus on Mount Olympus, we're going to stand above the others."

A ferocious competitor *in business, George Ball fights hard on the tennis court too.*

BILL SUMNER

Olympian feats seemed an unusually tall order for a firm that had fallen from second largest on Wall Street to sixth in the last decade and that had one of the highest turnover rates of account executives and lowest productivity rates per employee among its major competitors. For years the firm had been demoralized by a meddlesome executive committee's politicized decision-making and a management obsessed with cutting costs and fending off takeover attempts. It had been embarrassed by backing the Hunts in their silver speculation, unnerved by the uneasy merger of Bache Group Inc. with Prudential Insurance Co. of America in June 1981, and shaken by a loss of $49.4 million in the first half of 1982.

But this group of hard-bitten brokers, accustomed as they were to hubris and hyperbole, laughed only at Ball's unlikely allusion, not the lofty goal. The bull market that had followed Ball's July appointment went a long way to turning the firm to profitability in the second half—Prudential-Bache will report an estimated $10 million in earnings for 1982 on revenues of over $800 million. More important, Ball's combination of tough management and charismatic leadership had already made believers of his brokers.

In what one delighted Prudential executive called the First Hundred Days—during which Ball slipped a disc playing squash and had to work several weeks flat on his back—

the new chief executive blitzkrieged through offices around the country, drumming out the message to account executives in cocktail party pep talks that he wants to build Pru-Bache into "the prototype of the next-generation investment firm."

BALL'S IMMEDIATE MOVES were substantial—and hard-boiled. He fired five top executives and 15 lower-ranking ones. He streamlined the management, setting up eight divisions reporting directly to him. Among those now subordinate to him are Chairman Harry A. Jacobs Jr., 61, and Vice Chairman H. Virgil Sherrill, 62, who used to run the shop. Ball reduced the executive committee to a simple coordinating body and got rid of one of Bache's *two* boards of directors, arguing that it was superfluous.

In a controversial move, Ball hired away the top research triumvirate from E.F. Hutton Group Inc., where he had been president. Ten out of 29 analysts at Prudential-Bache were purged shortly after. He also instituted a policy requiring a response within 24 hours to proposals or problems raised from below, and created an innovative "partnership bonus plan." If the firm earns at least 15% on its operating equity in any year, he will give back roughly a quarter of those profits to top performers. The scheme overcomes a major handicap: as part of a mutual company, Prudential-Bache has no stock with which to reward high achievers.

Some of Ball's other moves were image building, such as changing the firm's name to Prudential-Bache Securities (at a cost of $4 million for stationery, forms, and extra advertising expenses). He changed advertising agencies, moving from McCann-Erickson to Kenyon & Eckhardt, and launched an ad campaign stressing the financial strength Prudential brings to Bache and pitching the line that the company is a full-service firm helping people plan for the future rather than simply pick stocks. And he decreed a host of cosmetic changes, from new plants in the lobby of the firm's headquarters at 100 Gold Street in lower Manhattan to linen towels in the executive bathrooms.

As improbable as it may have seemed last summer, Ball's move to Bache has turned the company into a hot firm on the Street. Prudential-Bache executives have been getting many calls from account executives at other firms asking for jobs. Some have gone so far as to stuff their résumés into Ball's mailbox at his suburban New Jersey home.

Even more improbable, however, was Ball's decision to move to Prudential-Bache in the first place. As president of the second-largest retail firm on Wall Street—"When E.F. Hutton talks, people listen"—he had built one of the most aggressive and productive retail sales forces in the business and was undisputed heir apparent to Chairman Robert Fomon, 58. It was not uncommon to hear insiders remark that George Ball *was* E.F. Hutton. Moreover, Ball—no kin to the other George Ball, once Under Secretary of State and recently with Lehman Brothers Kuhn Loeb—had been quoted widely in the press deriding the "synergies" that were supposed to emanate from mega-mergers like that between Prudential and Bache.

A slight, intense man with neatly combed red hair, penetrating blue eyes, and a chiseled schoolboy look, Ball has a touch of the missionary about him that makes him seem out of place in the casino atmosphere of the brokerage business. He is an avid tennis player who runs two miles a day to keep in shape and looks like he might fit in cavorting on the beach with the British runners in *Chariots of Fire*. Something is burning inside him and however it manifests itself, whether in his enthusiasm for tennis, the brokerage business, or talking ideas, it is contagious.

Among brokers, Ball has the reputation of being one of them, one of the few top executives who has risen through the retail ranks, who understands their entrepreneurial sensibilities, appreciates their importance as revenue producers, and most amazing of all, enjoys them as people, insecure and motley a bunch as they are. At Hutton he socialized regularly at every level of the organization, making a point to remember each broker's name and often his or her spouse's name as well, sending follow-up notes and gifts. When the news of his defection came out, Hutton brokers were stunned. "It was like reading in the newspapers that the Pope had become a Communist," said one.

According to Fomon, who claims Ball has become a different person since he left for Pru-Bache, his departure was a simple case of impatience. "George is very ambitious and didn't want to wait seven years for my retirement," he says. Infuriated by Ball's wholesale raid on his top research staff and what he labels as Ball's proselytizing of his account executives, Fomon wrote Prudential Chairman Robert Beck, 57, a letter fulminating over Ball's ungentlemanly behavior and charging that the ex-Hutton contingent had "unlawful possession" of confidential lists of institutional clients. Ball has denied the charges, saying only, "Bob's allegations are preposterous and he knows it."

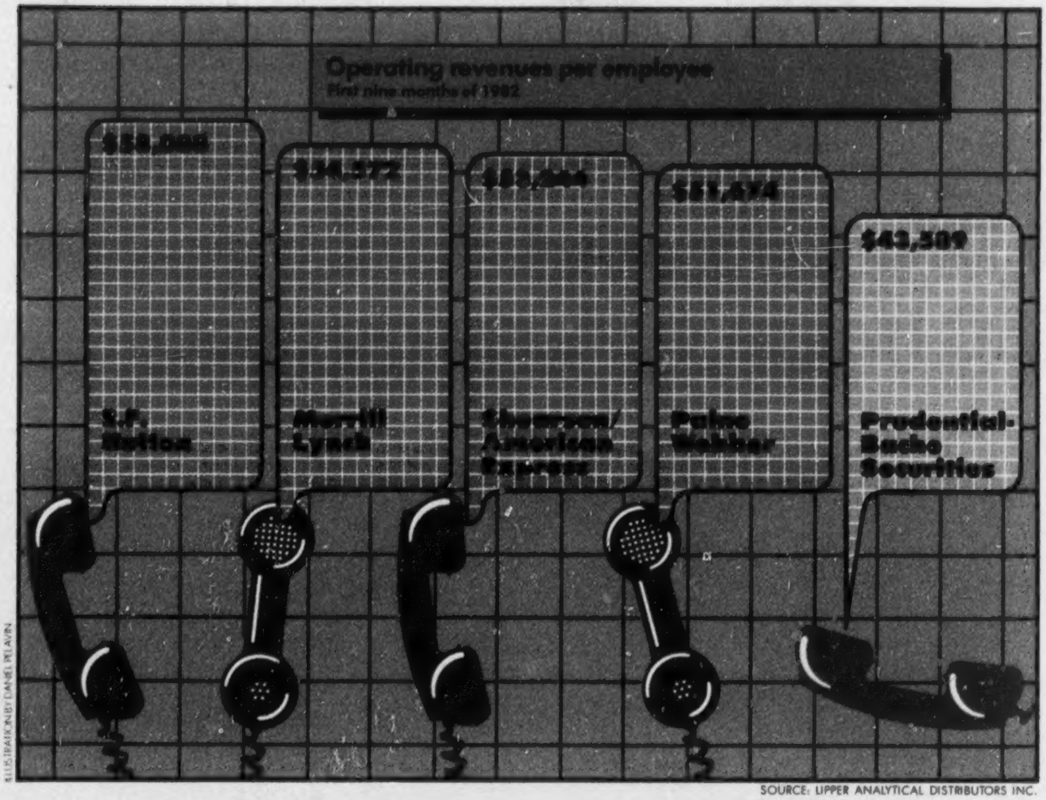
The chairman of Hutton has since subsumed not only Ball's title but his media role as leading mega-merger skeptic, reserving his most barbed remarks, of course, for Prudential-Bache and apostate Ball. "Bob Beck at Prudential must wish he never heard of Bache," says Fomon. "They've got unprofessional account executives and have never known how to make money. Everybody considered Bache the lousiest firm on the Street and that's not just me talking, but George Ball. George ridiculed Bache the most."

Of course, Ball had been watching the combination of deregulation and record interest rates inalterably change the financial marketplace, making it increasingly permissible and tempting for brokerage houses, insurance companies, and banks—not to mention retailers and anybody else with grand financial ambitions—to cross over into each others' game preserves. Hutton did its share of poaching under his management—the most notable example being its innovation of so-called universal life insurance.

But Prudential's offer to Ball proved irresistible—and not mainly because of money. Though he will be getting $250,000 in salary plus a bonus of one to three times that base, depending on results, Ball says the money isn't that much greater than he would have earned at Hutton. The clincher was that Prudential was willing to throw in operating control of PruCapital, its $3-billion lending arm, which authorized $600 million in new loans to small and medium-size businesses in 1982. It will be a springboard for Ball to leap, as he had planned to do at Hutton, into the lending business.

CONCEPTUALLY, Ball's next-generation investment firm rests on three premises: that the broker can be turned into a professional money manager with the help of graduate-level financial training courses and computer technology; that research can play a pivotal rather than a passive role in the selection and marketing of the many new investment products; and that Prudential's resources, in particular its lending and investment-management capabilities, can give the firm extra leverage to catapult itself to the front of the pack—if not in size, then in performance. Not so far down the road he might acquire a consumer bank. "We're not talking about a little S&L, either," says Ball. "We plan to get into banking in an important way."

Ball is finding some synergy after all in Bache's connection with Newark-based Prudential, the nation's largest insurance company, with $62 billion in assets. For instance, Ball intends to save over $25 million annually by passing along administrative and investment management functions to Prudential. In addition, Pru-Bache will draw on Prudential's expertise to develop and market new products in such areas as real estate, options, and oil and gas.



SOURCE: LIPPER ANALYTICAL DISTRIBUTORS INC.

ILLUSTRATION BY DANIEL PELAVIN

The Productivity Laggard

Looking at this chart, it is easy to see why productivity is a sore subject at Prudential-Bache Securities. In revenue produced per employee, not including interest income, Pru-Bache comes out last among the five biggest retail brokerage firms that break out figures (Sears' Dean Witter does not). One reason, says Perrin Long, an analyst with Lipper Analytical Distributors, is that Pru-Bache brokers are 25% to 30% less productive than their competitors, a view brokers at other Wall Street firms delight in promulgating. But Pru-Bache President George Ball thinks the people he inherited aren't that bad. Says he, "If other firms stop telling lies about us, we'll stop telling the truth about them."

Whether PruCapital and Pru-Bache will be catalysts for one another remains to be proved. Plans to put brokers into Prudential insurance agencies to share customers and commissions, as Sears Roebuck stations Dean Witter Reynolds brokers in its stores, have stirred about as much enthusiasm among the troops as if New Yorkers had been invited to try the theater in Peoria.

What Ball most likes to conjure up is a vision of Pru-Bache as a sort of avant-garde financial services company, creating new products, services, and strategies, occasionally drawing on Prudential's technicians to work out the mundane details, and then testing them out among its affluent clients. Once proved, the new ideas are passed back to Prudential's 23,000-person sales force to mass-market. "We dream up and design the products," Ball sums up the relationship, "and they put them into place."

Ball must resolve some sticky problems. He wants to hold expenses to the present $400 million a year while paying bigger salaries to attract and keep good people. He also wants to start new training programs and expand the research staff. Some of the money will be found by firing higher-level—and highly paid—employees who don't meet his standards. "We have to be brutal about getting rid of second-raters," he says, "and then plow their salaries back in."

Prudential expects Pru-Bache to perform at least as well as its other investments, which are estimated to have returned an average 10% in 1982. Based on the $385 million it paid for Bache, that works out to $38.5 million a year. While Pru-Bache was lucky to make any money last year, Ball figures he can hit the target return in 1983—and double it in three years. "I would like to think that within a year we will be competitive with anyone else in every respect," he says. "Some things will take longer, but I want to be perfect tomorrow."

THINGS STILL AREN'T MOVING fast enough for him. His engines are over-revving, a trait disruptive to his pitmen who must overhaul the company according to new specs while keeping it running smoothly at the same time. "He's working on so many things at the same time," says Robert Sherman, 45, the executive vice president who heads the retail group, "that sometimes it's hard for us to work on our priorities. Once he slows down, things will be better."

As he wanders restlessly about his new office at 100 Gold Street, looking at joggers setting out across the Brooklyn Bridge and practicing his backhand with a paddle-tennis racket he keeps handy on his desk, it is clear the race he is running is with himself. The talk on Wall Street is that he would like to succeed Beck as chief executive at Prudential in seven or eight years and from there move on to national politics.

He has heard the rumors and, with a mischievous smile, searches for the right comeback. "Politics is a necessary blot on the face of the universe," he says, twirling his racket in his hand. "But to be nice and perpetually cheery all the time must be the most onerous and laborious responsibility one could put on someone." Two hours later, cheery as a politician, he is telling Newark jokes at a get-acquainted reception for Prudential-Bache brokers in Parsippany, New Jersey. It's a long way to Mount Olympus, but George Ball is picking up speed.

■ The new financial services free-for-all is about as confusing to U.S. investors as Canadian-rules football. That was one of the findings of consumer research conducted by Kenyon & Eckhardt, the advertising agency that created Pru-Bache's "Bring us your future" campaign. K&E also found that to investors, all the players, pedigreed or hybrid, look, sound, and seem to perform about the same. The big firms are all computerized operations with harried brokers who don't have time to listen. The slogan for the 1980s may well be, "When a client talks, his broker had better listen." ■

NOTE

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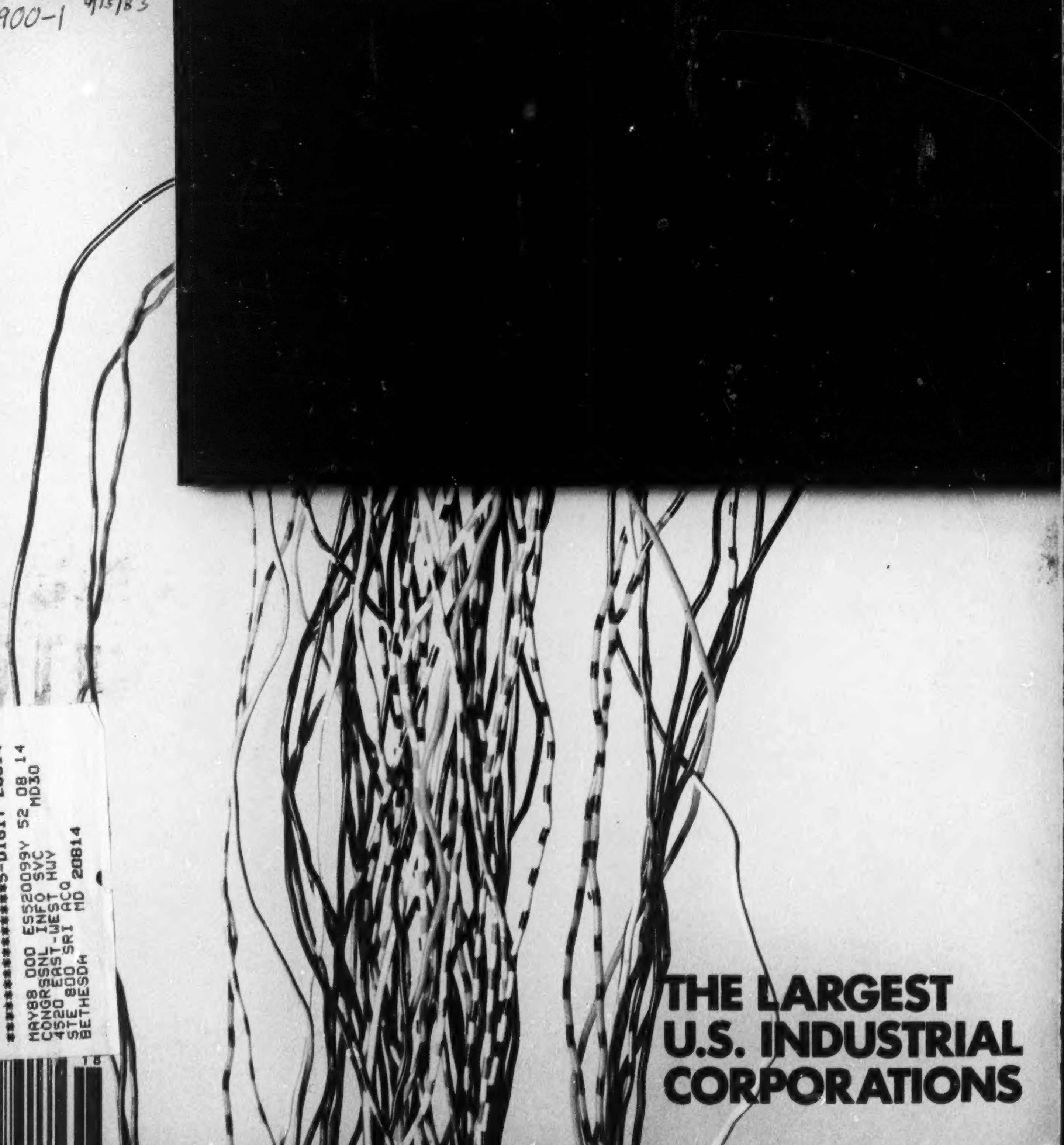

THE LARGEST U.S. INDUSTRIAL CORPORATIONS

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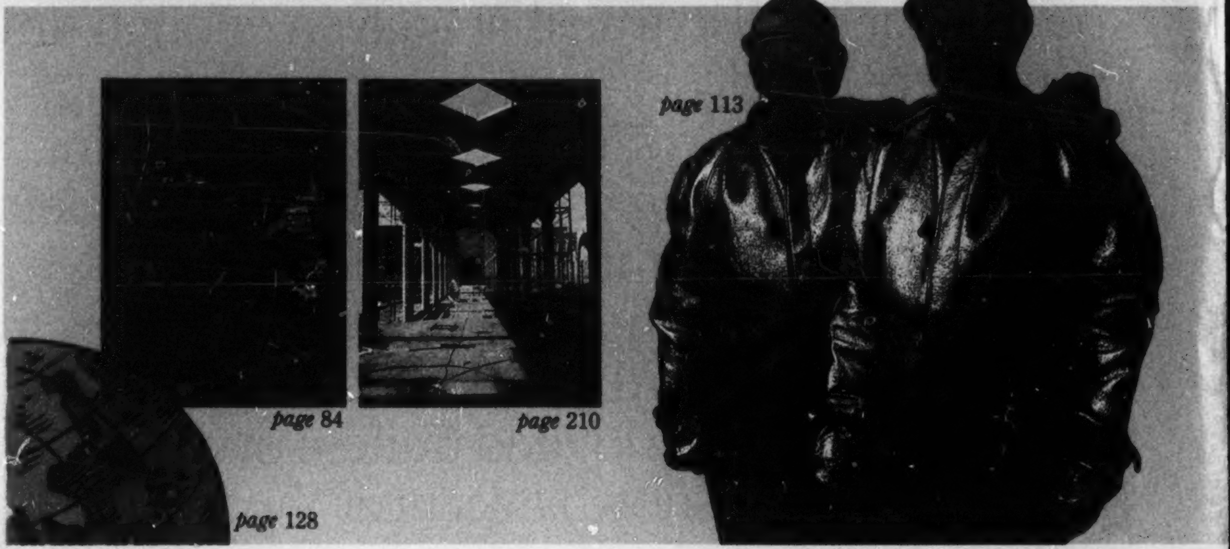

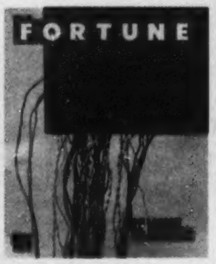

Evoking the increased prominence of high-tech companies among the FORTUNE *500, artist André Thijssen had a 500-shaped printed circuit board prepared and then photographed it for the cover with a complement of wiring. This year's ranking of the largest U.S. industrial corporations begins on page 226; related articles are highlighted in red at right.*

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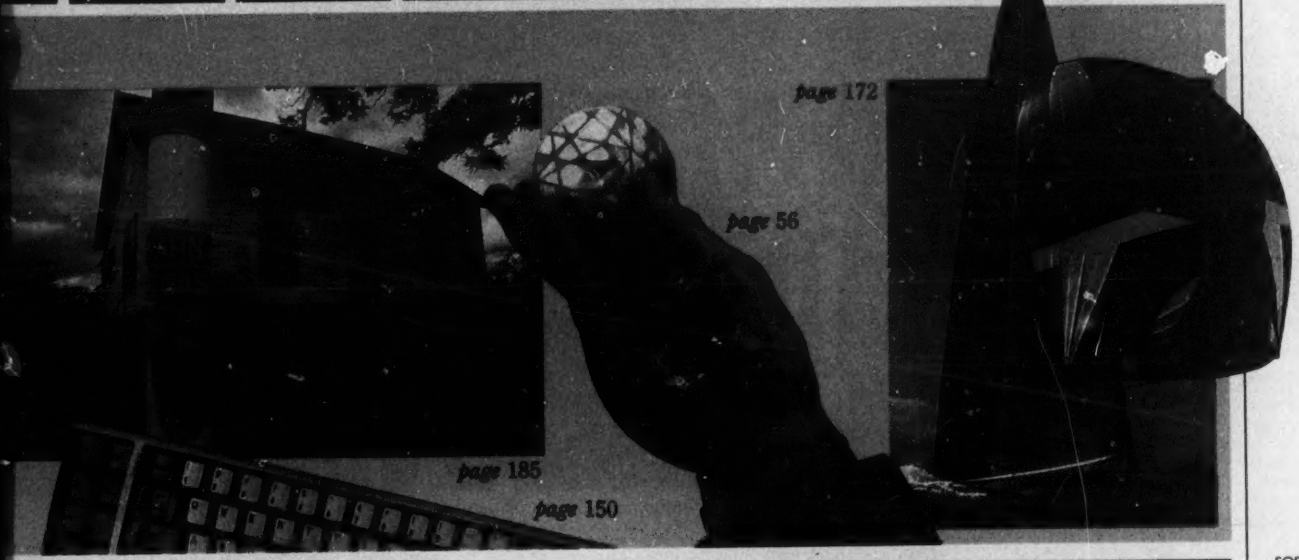

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THE

THE FORTUNE DIRECTORY OF THE LARGEST U.S. INDUSTRIAL CORPORATIONS

■ Recession buffeted the FORTUNE 500 in 1982, punishing both sales and profits. Overall the 500's profits fell 27.1% from the 1981 level (or 33.2% in real terms, after adjustment for inflation of 6.1% as measured by the consumer price index). That was the largest earnings dip in the 29-year history of the 500. The 5.7% decline in total sales was the second drop ever and the first since 1958. In real terms, adjusted for the increase in the CPI, the 500's 1982 sales fell 11.8% from 1981. List-watchers more impressed by rank than numbers will notice an unusual turbulence at the top, mainly occasioned by the sagging price of oil.

Though Exxon retained its No. 1 ranking, its sales fell below $100 billion for the first time since 1979. The $10-billion decline was greater than the *total* revenues reported by any but the top 29 companies among the 500. Several other oil companies lost ground to manufacturers, including, of all people, the carmakers. Not that the auto folks had a great year, but they rose on the list because even they did better than the oils.

After two years as No. 2, Mobil swapped places with General Motors to become No. 3. Texaco's sales fell $10.6 billion, but it managed to cling to fourth place. Standard Oil of California had to give up its No. 5 slot to Ford and slipped to No. 7, just behind International Business Machines, which moved up two places after an outstanding year. Atlantic Richfield left the top ten, sinking to No. 12—once again behind GE, No. 11, which Arco had overtaken last year. One exception to the poor performance in the energy sector: Mitchell Energy & Development, No. 285, a natural-gas producer whose sales climbed 53% from 1981.

For the first time since 1955, Du Pont entered the top ten as No. 8—thanks to a full year of Conoco's figures; Conoco was No. 14 in 1980, its last appearance as an independent company. The biggest upward move on the list traceable to an acquisition was Allegheny International's rise from No. 204 to No. 142. Allegheny's sales increased 49.7% in its first full year of owning Sunbeam, which was No. 237 on last year's list.

Three newcomers to the 500 had the greatest sales increases from 1981 to 1982. Coleco, No. 444, a maker of video games, boosted its sales by 186.7%. Sales of Apple Computer, No. 411, rose 74.2%, and those of Tyco Laboratories, No. 426, a maker of fire protection equipment and electronic components, went up 53%.

The profit decline of the 500 in 1982 would have been more dramatic except for some new accounting procedures. The most important one takes most currency translation adjustments off the income statement and places them in the equity portion of the balance sheet. Ford, which had losses of over $1 billion in 1980 and 1981, reported losses of $657.8 million in 1982. Without the new treatment of foreign exchange losses, Ford's 1982 deficit would have been $220 million greater. United Merchants & Manufacturers, No. 423, also got a big boost from accounting; the company would have been in the red had it not been for an extraordinary gain of $139 million, mostly from a debt restructuring.

Fifty-eight companies reported losses in 1982, another record for the 500. International Harvester, No. 73, and Bethlehem Steel, No. 64, each lost more than $1 billion. Harvester's $1.6-billion deficit was second in the 500's history only to the $1.7 billion lost in 1980 by Chrysler, No. 29 this year and eking out a profit.

IBM, sixth in sales, was this year's profit star, overtaking Exxon. IBM's earnings rose by about a third, while Exxon's fell 24.8%. The companies with the biggest profit increases over 1981: North American Coal, No. 461 (2,276%; see page 261), and Warner-Lambert, No. 119 (1,797%).

Three companies on this year's list—one more than last year—show stockholders' equity of less than zero. International Harvester and AM International, No. 397, saw equity drained away by deficits. Chrysler got to this cellar by a different route: the company raised funds by issuing redeemable preferred stock in 1980 and 1981. FORTUNE, taking its cue from the SEC, does not include redeemable preferred in equity when the capital must be paid back.

FORTUNE 500 employment was hard hit in

500

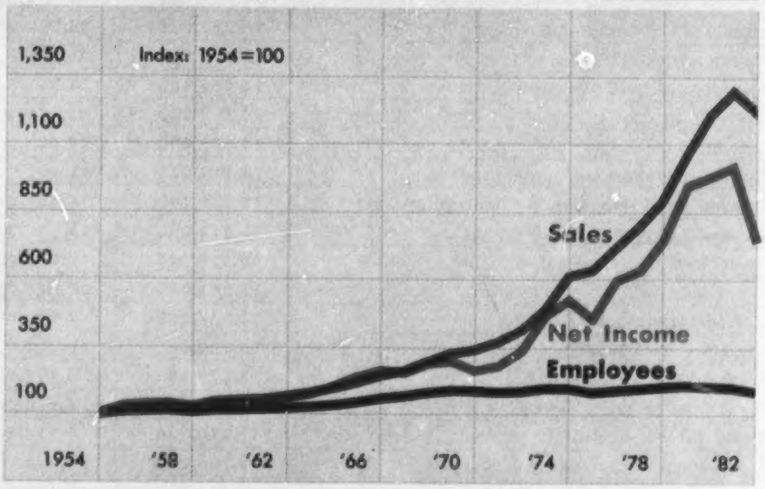
1982. Only in 1958 and in 1975 did the drop in employment for the 500 as a whole even come close to this year's 8% decline. Of the 1.3 million people whose jobs disappeared at FORTUNE 500 companies during 1982, 11% had worked at the top five: Exxon, General Motors, Mobil, Texaco, and Ford.

Grim as the picture looked for sales, profits, and employment in 1982, the stock market rise that began in August produced a median total return to investors—combining price appreciation and dividends—strikingly better than 1981's negative 0.35% (see page 263). If an investor on the last day of 1981 had bought stock in the 500's median performer for 1982—Dexter, No. 439, a producer of adhesive and other specialty chemicals—and sold it one year later, he would have pocketed a very nice 21.22%. A long-term investor in the 500 would have captured an annual average total return for ten years of 9.3%.

Forty-one companies left the 500 this year, again a new record. Of these departures, only 14, far fewer than 1981's 20, can be attributed to mergers or acquisitions. Thirteen dropped off the list because their sales fell below the $423,651,000 recorded for this year's No. 500, Ametek, a precision-instrument manufacturer. (Last year's No. 500, Shaklee, had sales of $454,522,000.) Four disappeared because they no longer publish figures—three went private and one, Saxon Industries, is in liquidation.

Ten companies left the list because they no longer meet the requirement that to be included in the FORTUNE 500 a company must derive over 50% of its sales from manufacturing or mining (see page 258). They will find places on a brand-new roster—the FORTUNE Service 500—which will appear in the June 13 issue. Ranked in seven categories will be the 100 top financial, diversified service, and commercial banking companies, and the top 50 life insurance, retailing, utility, and transportation companies. The largest company leaving the 500 for the Service 500 is RCA. The service segments of its business now outpeacock manufacturing, and RCA will be found on this year's list of diversified service companies. —ALISON BRUCE REA

THE 500 THROUGH THE YEARS



PERFORMANCE OF THE 500

	1982	1981
Sales (billions)	$1,672.2	$1,773.4
Change in sales	5.7%	7.5%
Profits (billions)	$61.4	$84.2
Change in profits	−27.1%	3.7%
Assets (billions)	$1,308.7	$1,282.8
Number of sales increases	200	420
Number of profit increases	189	307
Number of money losers	58	31
Median return on sales	3.6%	4.6%
Median return on equity	10.9%	13.8%
Median total return to investors	21.22%	−.35%
Number of employees (millions)	14.4	15.6

Bright spots were few *in the FORTUNE 500's recession-struck landscape last year. From sales and profits to median return on equity, the numbers were mostly down. Among the few that were up: assets; median total return to investors, a legacy of the stock market rally that began in August; and median sales per employee, which reached a new high—$90,837—partly because of the 500's grim decline in jobs.*

THE 500 LARGEST U.S. INDUSTRIAL CORPORATIONS RANKED BY SALES

RANK		COMPANY	SALES	ASSETS		NET INCOME		STOCKHOLDERS' EQUITY	
1982	1981		$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK
1	1	**Exxon** (New York)	97,172,523	62,288,530	1	4,185,932	2	28,440,191	1
2	3	**General Motors** (Detroit)	60,025,600	41,397,800	2	962,700	12	18,287,100	3
3	2	**Mobil** (New York)	59,946,000	36,439,000	3	1,380,000	8	14,742,000	4
4	4	**Texaco** (Harrison, N.Y.)	46,986,000	27,114,000	5	1,281,000	10	14,226,000	5
5	6	**Ford Motor** (Dearborn, Mich.)	37,067,200	21,961,700	9	(657,800)	489	6,077,500	17
6	8	**International Business Machines** (Armonk, N.Y.)	34,364,000	32,541,000	4	4,409,000	1	19,960,000	2
7	5	**Standard Oil of California** (San Francisco)	34,362,000	23,490,000	8	1,377,000	9	13,246,000	6
8	12	**E.I. du Pont de Nemours** (Wilmington, Del.)	33,331,000	24,343,000	6	894,000	14	10,850,000	8
9	9	**Gulf Oil** (Pittsburgh)	28,427,000	20,436,000	13	900,000	13	9,914,000	11
10	7	**Standard Oil (Indiana)** (Chicago)	28,073,000	24,289,000	7	1,826,000	4	11,426,000	7
11	11	**General Electric** (Fairfield, Conn.)	26,500,000	21,615,000	11	1,817,000	5	10,198,000	10
12	10	**Atlantic Richfield** (Los Angeles)	26,462,150	21,632,775	10	1,676,078	6	9,868,317	12
13	13	**Shell Oil** (Houston)	20,062,000	21,376,000	12	1,605,000	7	10,290,000	9
14	19	**U.S. Steel** (Pittsburgh)[1]	18,375,000	19,432,000	14	(361,000)	486	6,468,000	15
15	18	**Occidental Petroleum** (Los Angeles)[2]	18,212,226	15,772,492	17	155,602	104	2,689,713	45
16	14	**International Telephone & Telegraph** (New York)	15,958,440	14,131,673	18	702,816	20	6,122,620	16
17	15	**Phillips Petroleum** (Bartlesville, Okla.)	15,698,000	12,097,000	19	646,000	22	5,773,000	18
18	17	**Sun** (Radnor, Pa.)	15,519,000	12,019,000	20	537,000	25	5,192,000	20
19	16	**Tenneco** (Houston)	15,241,000	17,378,000	15	819,000	16	5,474,000	19
20	20	**United Technologies** (Hartford)	13,577,129	7,993,376	31	533,721	26	3,481,790	34
21	21	**Standard Oil (Ohio)** (Cleveland)	13,120,000	16,016,000	16	1,879,000	3	7,221,000	14
22	22	**Western Electric** (New York)[3]	12,579,900	8,197,800	30	336,700	42	4,757,100	25
23	25	**Procter & Gamble** (Cincinnati)[4]	11,994,000	7,810,000	34	777,000	19	4,164,000	27
24	23	**Getty Oil** (Los Angeles)	11,970,730	9,924,490	26	691,590	21	5,100,558	22
25	32	**R.J. Reynolds Industries** (Winston-Salem, N.C.)	10,906,000*	10,255,000	24	870,000	15	4,766,000	24
26	28	**Eastman Kodak** (Rochester, N.Y.)	10,815,000	10,622,000	22	1,162,000	11	7,541,000	13
27	24	**Dow Chemical** (Midland, Mich.)	10,618,000	11,807,000	21	399,000**	35	5,040,000	23
28	27	**Union Oil of California** (Los Angeles)	10,390,400	8,511,300	28	804,000	17	4,748,100	26
29	26	**Chrysler** (Highland Park, Mich.)	10,044,938	6,263,576	38	170,119**	96	(329,753)	500
30	29	**Dart & Kraft** (Northbrook, Ill.)	9,974,400	5,133,800	50	350,300	40	2,773,500	44
31	34	**Westinghouse Electric** (Pittsburgh)	9,745,400	8,427,300	29	449,300	30	3,175,000	37
32	43	**Philip Morris** (New York)	9,101,600*	9,691,900	27	781,800	18	3,662,900	30
33	30	**Union Carbide** (Danbury, Conn.)	9,061,000	10,616,000	23	309,700	50	5,159,200	21
34	31	**Boeing** (Seattle)	9,035,000	7,593,000	33	292,000	52	2,813,000	41
35	41	**Beatrice Foods** (Chicago)[5]	9,023,520	4,743,981	56	390,136	36	2,421,957	49
36	35	**Ashland Oil** (Russell, Ky.)[7]	8,888,115	4,210,481	61	180,864	88	1,047,231	141
37	38	**Goodyear Tire & Rubber** (Akron, Ohio)	8,688,700	5,193,800	40	264,800	57	2,457,200	48
38	42	**Xerox** (Stamford, Conn.)	8,455,600	7,667,700	32	423,700	31	3,724,300	29
39	52	**General Foods** (White Plains, N.Y.)[8]	8,351,149	3,860,737	74	200,207	73	1,625,826	84
40	33	**Amerada Hess** (New York)	8,342,570	6,145,303	39	168,662	98	2,570,536	47
41	49	**PepsiCo** (Purchase, N.Y.)	7,498,998	4,197,470	64	224,284	66	1,650,468	82
42	48	**Rockwell International** (Pittsburgh)[7]	7,395,400	4,870,300	55	331,600	44	2,097,300	59
43	45	**McDonnell Douglas** (St. Louis)	7,331,300	4,621,800	57	214,700	69	1,819,600	72
44	54	**Minnesota Mining & Manufacturing** (St. Paul)	6,601,000	5,514,000	46	631,000	23	3,548,000	31
45	37	**Caterpillar Tractor** (Peoria, Ill.)	6,469,000	7,201,000	35	(180,000)	481	3,496,000	32
46	76	**General Dynamics** (St. Louis)	6,352,600	2,639,500	121	132,800	125	1,175,000	124
47	50	**Monsanto** (St. Louis)	6,325,000	6,077,000	40	352,000	39	3,490,000	33
48	58	**Coca-Cola** (Atlanta)	6,249,718	4,923,310	53	512,232	27	2,778,654	43
49	55	**Allied** (Morristown, N.J.)	6,167,000	6,272,000	37	272,000	56	3,207,000	36
50	53	**W.R. Grace** (New York)	6,127,553	4,915,665	54	319,489	46	2,197,982	56

THE DEFINITIONS AND CONCEPTS UNDERLYING THE FIGURES IN THIS DIRECTORY ARE EXPLAINED ON PAGE 254.

N.A. Not available. *Does not include excise taxes; see the explanation of "sales" on page 254. **Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 254. †Average for the year; see the reference to "employees" on page 254. ‡Reflects an extraordinary charge of at least 10%; see the explanations of

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS				INDUSTRY CODE
		SALES		STOCKHOLDERS' EQUITY					1972-82 GROWTH RATE		1982		1972-82 AVERAGE		
NUMBER	RANK	PERCENT	RANK	PERCENT	RANK	1982/$	1981/$	1972/$	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	
173,000†	8	4.3	203	14.7	149	4.82	6.44	1.71	10.92	188	4.80	312	10.26	198	29
637,000†	1	1.6	364	5.3	368	3.09	1.07	7.51	(8.50)	367	68.26	56	5.44	321	40
188,000	6	2.3	325	9.4	288	3.31	5.72	1.41	8.91	223	12.44	276	9.72	215	29
60,330	53	2.7	303	9.0	298	4.92	8.73	3.27	4.17	289	3.41	320	5.79	312	29
379,229†	2	—		—		(5.46)	(8.81)	6.82	—		132.10	10	2.29	373	40
364,796	4	12.8	15	22.1	31	7.39	5.63	2.21	12.83	146	75.28	44	5.72	313	44
41,726	90	4.0	219	10.4	264	4.03	6.96	1.61	9.61	213	(19.77)	405	10.93	180	29
165,013	9	2.7	306	8.2	314	3.75	7.55	2.83	2.85	305	2.75	325	0.32	400	28
51,800	71	3.2	275	9.1	297	4.98	6.37	0.98‡	18.02	79	(7.99)	367	8.33	247	29
57,810	57	6.5	97	16.0	119	6.25	6.56	1.34	16.65	88	(18.17)	401	10.75	189	29
367,000†	3	6.9	86	17.8	76	8.00	7.26	2.91	10.64	194	71.12	52	6.94	282	36
51,600	70	6.3	106	17.0	93	6.61	6.66	0.87	22.48	34	(5.28)	355	11.68	165	29
36,504	114	8.0	67	15.6	130	5.19	5.51	0.97	18.26	75	(11.82)	382	15.21	88	29
119,987†	15	—		—		(3.99)	12.07	1.93	—		(23.85)	419	6.71	288	29
54,023	63	0.9	402	5.8	356	0.69	7.77	(0.16)‡	—		(7.30)	363	11.18	175	10
283,000	5	4.4	195	11.5	232	4.75	4.58	3.85	2.12	318	14.04	265	0.46	399	36
39,600	142	4.1	214	11.2	241	4.23	5.78	0.99	15.63	103	(14.01)	390	7.68	267	29
41,438	91	3.5	253	10.3	267	4.49	8.85	1.38	12.52	155	(26.10)	426	10.30	197	29
96,000	21	5.4	180	15.0	144	5.74	6.01	2.50	8.67	230	4.49	316	7.81	270	29
184,000	7	3.9	223	15.3	135	8.74	7.71	2.09	15.38	107	42.66	133	15.21	87	41
49,837	72	14.3	8	26.0	20	7.63	7.92	0.53	30.56	9	(8.01)	368	14.99	95	29
153,000†	10	2.7	307	7.1	328	N.A.	N.A.	N.A.	—		—		—		36
64,500	47	6.5	99	18.7	66	9.39	7.17	3.38	10.76	191	52.34	91	3.90	347	43
19,718	202	5.8	132	13.6	177	8.61	10.42	1.06	23.30	28	(21.01)	411	9.89	206	29
99,869	20	8.0	68	18.3	74	7.82	7.08	2.66	11.39	177	14.27	262	12.87	135	21
136,500	12	10.7	29	15.4	132	7.12	7.66	3.39	7.70	243	25.84	219	(1.92)	428	38
86,600	58	3.8	235	7.9	318	2.07**	3.00	1.04	7.13	251	5.42	306	4.16	342	21
20,035	198	7.7	72	16.9	98	4.63	4.56	0.86	18.33	73	(26.58)	430	14.18	109	29
73,714†	37	1.7	356	51.6	433	1.84**	(7.18)	4.27	(8.07)	364	426.31	2	(3.67)	437	40
79,933†	32	3.5	250	12.6	201	6.40	6.36	3.15‡,[5]	7.35	246	42.07	134	9.07	233	20
148,251†	11	4.6	184	14.2	161	5.16	5.10	2.24	8.70	229	59.50	71	4.80	332	36
72,000	39	8.6	57	21.3	35	6.23	5.41	1.17	18.20	77	27.79	209	10.10	201	21
103,229	18	3.4	256	6.0	353	4.47	9.56	3.38	2.83	306	9.53	286	6.62	293	28
95,700†	22	3.2	268	10.4	265	3.02	4.90	0.31	25.56	19	56.78	81	24.40	17	41
88,300	30	4.3	202	16.1	113	3.80	2.94	1.23	11.94	166	38.77	151	3.07	359	20
30.600	137	2.0	339	17.3	87	5.29	2.22	1.77	11.57	172	0.48	338	9.27	231	29
131,096†	14	3.0	279	10.8	251	3.59	3.59	2.68	3.08	301	91.57	23	7.92	259	30
109,940	16	5.0	165	11.4	235	5.00	7.08	3.16	4.70	284	(0.32)	340	(9.77)	449	38
64,000	48	2.4	321	12.3	210	4.05	5.14	1.32‡	11.86	168	31.89	190	9.30	224	20
8,887†	336	2.0	341	6.6	338	2.00	2.53	0.30‡	20.89	47	8.19	291	5.35	324	29
133,900	13	3.0	282	13.6	176	2.40	3.61	1.02	8.93	221	2.63	326	5.52	319	49
100,271	19	4.5	189	15.8	124	4.33	3.84	1.71**	9.74	211	34.54	171	16.98	64	41
72,481	38	2.9	284	11.8	221	5.44	4.44	3.82	6.79	257	47.64	108	7.02	280	41
87,388	26	9.6	41	17.8	77	5.37	5.74	2.17	9.48	214	43.49	129	2.13	377	38
61,306	52	—		—		(2.04)	6.66	2.41	—		(23.38)	418	2.48	370	48
85,085	28	2.1	338	11.3	238	2.41	2.25	0.46	18.01	80	37.63	158	21.61	27	41
52,199	68	5.6	141	10.1	273	8.21	11.50	3.49	8.93	222	14.37	261	9.49	225	28
40,600	97	8.2	63	18.4	72	3.95	3.90	1.60	9.46	216	56.77	82	0.66	395	49
44,337	83	4.4	193	5.5	309	6.22	9.17	2.40	9.99	207	(20.73)	409	6.16	307	28
82,200	29	5.2	158	14.5	151	6.62	7.58	2.26	11.35	179	(10.21)	375	10.02	203	28

"net income" and "earnings per share" on page 254. [1] Figures include Marathon Oil (1981 rank: 36), acquired March 11, 1982. [2] Figures include Cities Service (1981 rank: 39), acquired December 3, 1982. [3] Wholly owned by American Telephone & Telegraph. [4] Figures are for fiscal year ended June 30, 1982. [5] Figure is for KRAFTCO. [6] Figures are for fiscal year ended February 28, 1982. [7] Figures are for fiscal year ended September 30, 1982. [8] Figures are for fiscal year ended March 31, 1982.

RANK		COMPANY	SALES	ASSETS		NET INCOME		STOCKHOLDERS' EQUITY	
1982	1981		$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK
51	63	**Consolidated Foods** (Chicago)[4]	6,039,276	2,398,802	135	156,737	103	923,961	159
52	60	**Nabisco Brands** (Parsippany, N.J.)	5,871,100	3,691,600	79	314,700	49	1,835,900	71
53	56	**Union Pacific** (New York)	5,818,325	9,999,010	25	326,759	45	3,887,992	28
54	59	**Coastal** (Houston)	5,799,412	3,225,673	92	65,630	193	523,650	238
55	68	**Johnson & Johnson** (New Brunswick, N.J.)	5,760,900	4,209,600	62	473,400‡	28	2,799,800	42
56	57	**Lockheed** (Burbank, Calif.)	5,613,000	2,464,400	129	207,300	72	418,400	276
57	66	**Sperry** (New York)[8]	5,571,400	5,343,000	47	221,800	68	2,384,400	52
58	62	**Raytheon** (Lexington, Mass.)	5,513,370	3,510,191	83	318,766	47	1,711,786	76
59	69	**Honeywell** (Minneapolis)	5,490,400	4,470,900	60	272,900	55	2,143,400	58
60	61	**Gulf & Western Industries** (New York)[9]	5,486,329	5,847,252	44	168,602	99	2,176,710	57
61	51	**Armco** (Middletown, Ohio)	5,427,900	4,156,500	65	(345,100)	485	1,980,800	66
62	67	**Georgia-Pacific** (Atlanta)	5,402,000	5,150,000	49	153,000‡	110	1,989,000	64
63	80	**General Mills** (Minneapolis)[10]	5,312,100	2,701,700	115	225,500	65	1,232,200	116
64	47	**Bethlehem Steel** (Bethlehem, Pa.)	5,260,300	4,611,300	58	(1,469,600)	490	1,236,800	115
65	40	**LTV** (Dallas)	5,194,600	4,023,200	70	(154,900)	478	1,115,800	132
66	71	**TRW** (Cleveland)	5,131,872	3,124,847	96	196,260	77	1,519,451	88
67	74	**Continental Group** (Stamford, Conn.)	4,979,000	4,206,400	63	180,200	90	1,629,300	83
68	79	**Litton Industries** (Beverly Hills, Calif.)[9]	4,941,820	3,836,838	75	314,960	48	1,676,890	80
69	70	**Signal Companies** (La Jolla, Calif.)	4,935,600	3,608,700	82	113,200	139	1,694,500	79
70	72	**Colgate-Palmolive** (New York)	4,887,995	2,574,413	125	196,910	75	1,321,324	106
71	73	**Ralston Purina** (St. Louis)[7]	4,878,400	2,113,800	154	69,100	190	1,100,100	134
72	108	**McDermott** (New Orleans)[8]	4,843,186	4,030,032	68	213,449	70	1,174,558	125
73	46	**International Harvester** (Chicago)[11]	4,725,057¶	3,698,784	78	(1,638,193)	491	(216,777)	499
74	78	**Aluminum Co. of America** (Pittsburgh)	4,647,600	5,989,500	41	10,800**	380	3,112,500	39
75	65	**Deere** (Moline, Ill.)[11]	4,608,226	5,935,679	42	52,898	217	2,388,196	51
76	93	**American Home Products** (New York)	4,582,096	2,831,781	110	560,103	24	1,843,627	69
77	99	**Anheuser-Busch** (St. Louis)[12]	4,576,575*	3,902,847	72	287,264	54	1,526,601	87
78	82	**Greyhound** (Phoenix)	4,525,609	2,007,247	163	103,060	146	960,363	156
79	91	**Texas Instruments** (Dallas)	4,326,600	2,631,400	122	144,000	115	1,360,800	99
80	144	**Control Data** (Minneapolis)	4,292,000	6,911,900	36	155,100	105	1,725,000	74
81	110	**Hewlett-Packard** (Palo Alto, Calif.)[11]	4,254,000	3,470,000	85	383,000	37	2,349,000	53
82	84	**Weyerhaeuser** (Tacoma, Wash.)	4,186,224	5,924,391	43	168,922‡	97	3,084,920	40
83	83	**Dresser Industries** (Dallas)[11]	4,160,600	3,310,900	88	172,300	93	2,019,200	63
84	85	**Borden** (New York)	4,111,277	2,589,702	124	165,855	101	1,341,333	104
85	128	**Burroughs** (Detroit)	4,098,291	4,123,123	66	117,628	137	2,040,649	62
86	86	**Bendix** (Southfield, Mich.)[7]	4,092,100	3,870,800	73	132,800	124	1,481,000	89
87	89	**CPC International** (Englewood Cliffs, N.J.)	4,091,500	2,413,000	133	231,600	63	1,308,700	109
88	75	**Charter** (Jacksonville, Fla.)	4,063,613	1,628,046	187	35,260	271	640,791	202
89	81	**American Can** (Greenwich, Conn.)	4,063,400	2,647,300	119	(132,900)	475	804,100	175
90	96	**American Brands** (New York)	4,025,810*	4,040,332	67	381,240	38	1,988,808	65
91	77	**International Paper** (New York)	4,015,200	5,566,200	45	171,800	94	3,208,200	35
92	135	**Warner Communications** (New York)	3,989,985	3,186,355	94	257,811	59	1,395,972	95
93	95	**United Brands** (New York)[4]	3,972,506	1,268,262	219	2,750	423	568,248	221
94	92	**IC Industries** (Chicago)	3,925,500	3,952,400	71	47,600	229	1,131,000	130
95	137	**Digital Equipment** (Maynard, Mass.)[4]	3,880,771	4,024,013	69	417,155	32	3,164,464	38
96	88	**Firestone Tire & Rubber** (Akron, Ohio)[11]	3,869,000	2,672,000	116	6,000**	409	1,303,000	110
97	100	**Agway** (Dewitt, N.Y.)[4]	3,832,979	1,396,089	204	N.A.[13]		285,772	339
98	126	**Motorola** (Schaumburg, Ill.)	3,785,847	2,833,194	108	177,961	91	1,700,054	78
99	101	**Kerr-McGee** (Oklahoma City)	3,777,190	3,762,618	76	209,764	71	1,672,354	81
100	115	**Land O'Lakes** (Arden Hills, Minn.)[14]	3,776,138	792,454	289	N.A.[13]		244,170	364

¶Includes sales from discontinued operations of at least 10%; see the explanation of "sales" on page 254. N.A. Not available. *Does not include excise taxes; see the explanation of "sales" on page 254. **Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 254. †Average for the year; see the reference to "employees" on page 254. ‡Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 254. [a]Figures are for fiscal year ended

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS				INDUSTRY CODE
		SALES		STOCKHOLDERS' EQUITY					1972-82 GROWTH RATE		1982		1972-82 AVERAGE		
NUMBER	RANK	PERCENT	RANK	PERCENT	RANK	1982/$	1981/$	1972/$	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	
92,100	24	2.6	311	17.0	95	5.39	4.67	2.38	8.89	224	50.00	100	6.36	302	20
55,100	61	5.4	151	17.1	89	4.83	4.21	1.73	10.81	190	24.49	226	8.74	243	20
27,950†	150	5.6	139	8.4	310	3.38	4.27	1.16	11.29	181	(6.18)	358	14.02	116	29
5,800	406	1.1	391	12.5	204	2.65	(4.88)	2.12	2.26	317	(43.40)	457	(1.89)	426	29
79,700	33	8.2	63	16.9	99	2.52‡	2.81	0.72	13.38	136	36.29	161	3.03	360	42
70,200	41	3.7	240	49.5	4	10.96	(18.03)	1.43**	22.59	33	56.68	83	23.15	20	41
88,720	25	4.0	221	9.2	290	5.28	7.68	1.77	11.49	176	0.83	337	(0.68)	411	44
72,000	40	5.8	131	18.6	67	3.78	3.86	0.60	20.21	54	23.48	229	21.11	33	36
94,062	23	5.0	167	12.7	194	12.16	11.38	4.38	10.75	192	27.20	213	(1.91)	420	44
107,900	17	3.1	277	7.7	321	2.17	3.75	0.96**	8.50	233	10.24	283	9.61	220	23
52,013	69	—		—		(5.41)	4.97	1.52	—		(36.17)	441	6.54	296	33
44,000	84	2.8	294	7.7	322	1.44‡	1.51	1.40	0.28	332	35.65	165	7.73	265	26
75,893	35	4.2	207	18.3	73	4.46	3.90	1.02‡	15.90	99	40.74	137	7.66	266	20
66,900†	45	—		—		(33.64)	4.83	3.02	—		(11.60)	381	2.23	374	33
33,000	127	—		—		(3.20)	7.97	0.73	—		(27.83)	433	2.52	369	33
85,099	27	3.8	231	12.9	191	5.49	6.60	2.22	9.48	215	28.17	206	12.25	149	40
48,700†	73	3.6	244	11.1	243	4.80	6.61	2.77	5.68	270	11.77	279	8.29	248	34
75,000	36	6.4	103	18.8	59	7.69	7.61	(0.11)	—		(6.66)	362	17.89	55	36
53,200	65	2.3	326	6.7	333	1.56	2.95	0.58	10.99	186	1.83	332	18.51	80	41
43,700†	85	4.0	217	14.9	145	2.41	2.55	1.07	8.46	234	24.33	228	0.00	403	43
59,100	54	1.4	379	6.3	346	0.66	1.62	0.58	1.30	325	52.33	92	5.36	323	20
59,000	55	4.4	194	18.2	75	4.98	2.08	0.71**	21.51	41	(41.45)	452	6.92	283	34
43,290	56	—		—		(51.39)	(12.90)	3.17	—		(40.32)	450	(15.07)	455	40
40,900†	94	0.2	425	0.3	431	0.11**	3.97	1.54	(23.20)	385	27.42	212	10.30	196	33
46,372	74	1.1	390	2.2	407	0.78	3.79	1.91	(8.57)	368	(11.28)	380	6.80	285	45
54,591	62	12.2	16	30.4	10	3.59	3.18	1.10	12.56	152	28.49	205	5.00	330	42
38,133	110	6.3	107	18.8	57	5.97	4.79	1.61	14.00	125	60.19	68	4.47	339	49
47,239†	76	2.3	329	10.7	254	2.34	3.06	1.59	3.94	292	19.02	246	7.46	271	20
80,007	31	3.3	259	10.6	259	6.10	4.62	2.17	10.89	189	69.72	55	5.63	317	36
56,005	59	3.6	245	9.0	299	4.11	4.48	2.03	7.31	247	6.84	296	2.62	366	44
68,000	42	9.0	51	16.3	111	3.05	2.55	0.36	23.82	26	34.83	29	13.41	123	44
40,760	96	4.0	215	5.5	364	1.12‡	1.62	1.18	(0.52)	338	28.62	203	5.51	320	26
45,000	80	4.1	213	5.5	308	2.19	4.04	0.72	11.77	170	(38.19)	446	7.81	263	45
33,200†	126	4.0	216	12.4	209	5.81	5.45	2.18	10.30	198	77.85	37	10.35	195	20
62,000	50	2.9	293	5.8	358	2.80	3.58	2.36	1.72	321	30.43	196	(6.78)	445	44
61,600	51	3.2	267	9.0	302	5.80	18.49	2.54	8.61	232	38.98	149	14.12	113	40
38,364	108	5.7	137	17.7	78	4.80	4.57	1.83**	10.12	203	23.05	232	15.68	79	20
3,605	465	0.9	401	5.5	363	1.04	0.06	0.28**	14.02	124	47.69	107	12.99	132	29
36,000†	113	—		—		(7.31)	3.77	(3.02)‡	—		(1.78)	348	7.57	269	34
47,300	75	9.5	43	19.2	55	6.55	6.68	2.26	11.23	183	34.35	172	16.07	70	21
33,700	125	4.3	206	5.4	367	2.94	10.08	2.30	2.49	312	29.77	201	6.26	305	26
24,300	169	6.5	100	18.5	71	3.96	3.57	0.62	20.37	52	(37.13)	443	18.13	92	36
45,900	78	0.1	433	0.5	428	0.06	2.42	1.42	(27.12)	388	(26.28)	427	(1.88)	424	20
44,700	82	1.2	387	4.2	383	2.03	6.68	3.12	(4.21)	352	6.39	299	9.32	223	20
67,100	44	10.7	28	13.2	183	7.53	6.70	0.50	31.15	8	15.93	257	12.82	143	44
65,000	46	0.2	430	0.5	430	0.11**	2.33	2.36	(26.41)	387	51.26	97	2.83	364	30
17,998	216	—		—		N.A.	N.A.	N.A.	—		—		—		29
78,800	34	4.7	179	10.5	262	4.87	5.56	1.91	9.81	209	53.42	90	4.84	331	36
9,709	312	5.6	142	12.5	200	3.98	4.07	1.07	14.04	122	(20.14)	407	0.71	394	29
9,654†	316	—		—		N.A.	N.A.	N.A.	—		—		—		20

July 31, 1982. [10] Figures are for fiscal year ended May 31, 1982. [11] Figures are for fiscal year ended October 31, 1982. [12] Figures included Campbell Taggart (1981 rank: 270), acquired November 2, 1982. [13] Cooperatives provide only "net margin" figures, which are not comparable with the net income figures in these listings. [14] Figures include Midland Cooperatives (1981 rank: 467), acquired Janaury 1, 1982.

RANK		COMPANY	SALES	ASSETS		NET INCOME		STOCKHOLDERS' EQUITY	
1982	1981		$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK
101	97	**Champion International** (Stamford, Conn.)	3,737,378	3,471,994	84	39,350	252	1,737,097	73
102	107	**Archer Daniels Midland** (Decatur, Ill.)[4]	3,712,977	2,194,819	147	154,990	107	1,201,953	120
103	111	**H.J. Heinz** (Pittsburgh)[15]	3,688,500	2,129,570	153	192,802	78	1,028,872	143
104	113	**Bristol-Myers** (New York)	3,599,864	2,754,235	113	348,655	41	1,714,431	75
105	102	**Combustion Engineering** (Stamford, Conn.)	3,569,817	2,823,839	111	183,422	86	887,850	169
106	125	**Time Inc.** (New York)	3,564,328	2,896,337	103	153,115	109	1,360,022	100
107	98	**Owens-Illinois** (Toledo)	3,552,900	2,995,800	100	90,700	162	1,382,000	96
108	130	**Martin Marietta** (Bethesda, Md.)	3,526,506	2,837,826	107	91,642	159	321,560	319
109	116	**NCR** (Dayton, Ohio)	3,526,217	3,373,046	86	234,411	62	1,936,575	68
110	118	**Emerson Electric** (St. Louis)[7]	3,502,327	2,319,799	141	300,105	51	1,558,715	85
111	109	**FMC** (Chicago)	3,498,792	2,765,552	112	152,395	112	1,344,227	103
112	117	**Tosco** (Los Angeles)	3,465,964	1,298,067	214	132,409	126	302,053	329
113	106	**American Cyanamid** (Wayne, N.J.)	3,453,674	2,997,405	99	132,127	127	1,538,791	86
114	133	**Pfizer** (New York)	3,453,600	3,748,700	77	332,800	43	1,973,700	67
115	129	**Pillsbury** (Minneapolis)[10]	3,385,100	2,428,300	132	136,300	121	890,000	163
116	121	**Carnation** (Los Angeles)	3,382,212	1,712,326	178	183,353	87	1,105,637	133
117	127	**Esmark** (Chicago)[11]	3,303,220	1,758,241	175	107,566	144	642,957	200
118	122	**PPG Industries** (Pittsburgh)	3,295,500	3,270,100	89	155,100	106	1,706,900	77
119	119	**Warner-Lambert** (Morris Plains, N.J.)	3,245,967	2,906,357	102	174,970	92	1,377,962	97
120	155	**Borg-Warner** (Chicago)	3,195,300	2,462,600	130	167,400	100	1,359,700	101
121	112	**Diamond Shamrock** (Dallas)	3,177,379	3,194,013	93	185,091	83	1,407,231	92
122	131	**North American Philips** (New York)	3,168,052	1,825,848	172	73,564	186	783,512	179
123	123	**Penn Central** (New York)	3,165,400	3,099,000	97	131,500	129	1,467,700	90
124	141	**Norton Simon** (New York)[4]	3,068,785	2,193,173	148	107,709**	143	749,888	186
125	145	**Merck** (Rahway, N.J.)	3,063,017	3,647,652	80	415,137	33	2,203,988	55
126	104	**Celanese** (New York)	3,062,000	2,862,000	104	(34,000)	460	1,131,000	129
127	94	**National Steel** (Pittsburgh)	3,044,214	2,640,521	120	(462,773)	488	1,007,247	150
128	138	**B.F. Goodrich** (Akron, Ohio)	3,005,300	2,371,000	138	(32,800)	459	1,013,200	147
129	160	**Avon Products** (New York)[16]	3,000,800	2,233,200	146	196,600	76	1,219,400	118
130	114	**Reynolds Metals** (Richmond, Va.)	2,980,900	3,345,100	87	7,700**	399	1,373,100	98
131	195	**SmithKline Beckman** (Philadelphia)[17]	2,968,667	2,857,524	105	455,157	29	1,841,031	70
132	154	**Eli Lilly** (Indianapolis)	2,962,711	3,155,125	95	411,828	34	2,055,460	61
133	140	**Crown Zellerbach** (San Francisco)	2,947,400	2,385,600	136	(112,200)	472	1,120,200	131
134	147	**Kimberly-Clark** (Neenah, Wis.)	2,946,100	2,663,600	117	197,400	74	1,415,500	91
135	153	**Campbell Soup** (Camden, N.J.)[9]	2,944,779	1,865,519	171	149,613	113	1,055,762	140
136	124	**Textron** (Providence)	2,936,000	2,038,200	158	84,400	171	1,227,300	117
137	143	**Boise Cascade** (Boise, Idaho)	2,912,450	2,662,977	118	7,250	402	1,302,045	111
138	136	**Kaiser Aluminum & Chemical** (Oakland, Calif.)	2,911,500	3,644,400	81	(115,000)	473	1,347,300	102
139	162	**American Motors** (Southfield, Mich.)	2,878,416	1,607,319	190	(153,474)	476	154,629	431
140	132	**Burlington Industries** (Greensboro, N.C.)[7]	2,876,205	2,049,008	156	52,487	219	1,151,885	126
141	134	**Teledyne** (Los Angeles)	2,863,800	3,242,100	90	260,800	58	2,086,400	60
142	204	**Allegheny International** (Pittsburgh)[18]	2,856,738	2,081,120	155	47,258	231	703,010	194
143	103	**Inland Steel** (Chicago)	2,807,602	2,628,750	123	(118,795)	474	1,198,722	121
144	120	**Ingersoll-Rand** (Woodcliff Lake, N.J.)	2,774,725	2,402,718	134	52,271	221	1,215,611	119
145	87	**Republic Steel** (Cleveland)	2,738,160	3,033,426	98	(239,219)	484	1,403,036	93
146	161	**Quaker Oats** (Chicago)[4]	2,711,900	1,476,700	200	96,900	151	630,500	203
147	139	**Eaton** (Cleveland)	2,694,173¶	2,030,124	160	(189,630)	482	802,636	177
148	170	**Interco** (St. Louis)[6]	2,673,769	1,538,950	195	118,615	136	885,500	165
149	146	**Mead** (Dayton, Ohio)	2,666,500	2,238,521	144	(85,784)**	469	748,553	187
150	149	**Kidde** (Clifton, N.J.)	2,655,335	1,908,688	170	84,210	172	763,461	184

¶Includes sales from discontinued operations of at least 10%; see the explanation of "sales" on page 254. **Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 254. †Average for the year; see the reference to "employees" on page 254. ‡Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 254. [15]Figures are for fiscal year ended April 30, 1982. [16]Figures include Mallinckrodt (1981 rank: 477), acquired March 8, 1982. [17]Name changed from SmithKline upon merger with Beckman Instruments (1981 rank: 423), March 4, 1982. [18]Figures include Sunbeam (1981 rank: 237), acquired January 2, 1982.

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS				INDUSTRY CODE
		SALES		STOCKHOLDERS' EQUITY					1972-82 GROWTH RATE		1982		1972-82 AVERAGE		
NUMBER	RANK	PERCENT	RANK	PERCENT	RANK	1982/$	1981/$	1972/$	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	
38,800	106	1.1	395	2.3	406	0.45	1.38	1.71	(12.50)	372	25.01	224	6.35	303	26
8,324	349	4.2	210	12.9	192	2.03	2.43	0.24	23.80	27	38.39	155	23.51	19	20
42,052	88	5.2	157	18.7	60	4.10	3.63	0.93	15.99	97	49.49	101	15.75	77	20
34,900	120	9.7	37	20.3	41	5.18	4.58	1.30	14.83	111	30.42	197	10.14	200	42
40,368	98	5.1	160	21.4	34	5.54	4.45	0.74‡	22.30	37	(6.30)	360	9.72	216	45
26,000	160	4.3	205	11.3	240	2.45	2.43	0.77‡	12.27	162	38.89	150	16.89	65	27
46,684	77	2.6	314	6.6	337	3.18	5.15	2.12	4.14	291	0.29	339	8.10	252	32
40,900	95	2.6	310	28.5	14	2.92	5.39	1.48	7.03	252	26.85	214	20.09	39	41
63,000	49	6.6	91	12.1	216	8.75	7.72	(2.64)	—		102.53	16	13.52	121	44
52,700†	67	8.6	58	19.3	54	4.37	4.26	1.32	12.72	148	37.80	156	6.12	308	36
33,926	123	4.4	200	11.3	236	4.56	4.15	1.40	12.53	154	32.28	183	9.28	230	28
3,100	479	3.8	232	43.8	6	5.99	1.02	0.03	69.84	1	(25.35)	423	11.73	162	29
40,217	101	3.8	230	8.6	307	2.74	4.11	2.24	2.04	319	25.87	218	6.59	294	28
40,000	103	9.6	38	16.9	101	4.26	2.95	1.50	11.00	185	32.82	180	7.87	260	42
55,200	60	4.0	218	15.3	136	6.29	5.95	1.60	14.67	115	31.99	188	10.81	104	20
21,770	180	5.4	146	16.6	106	5.01	4.67	1.52	12.67	149	59.49	72	4.10	345	20
29,600	143	3.3	265	16.7	102	6.79	5.63	1.48	16.46	93	43.74	128	15.96	72	20
37,000†	112	4.7	178	9.1	296	4.51	6.27	2.66	5.42	276	43.34	130	11.18	174	32
42,000	89	5.4	149	12.7	196	2.20	0.12	1.58	3.37	297	33.25	179	(1.17)	419	42
67,700†	43	5.2	156	12.3	211	3.90	4.00	1.52	9.88	208	48.32	106	14.14	111	45
10,880	296	5.8	129	13.2	184	2.94	1.94	0.85	13.21	140	(10.79)	377	12.58	142	29
45,823	79	2.3	323	9.4	287	5.33	7.67	2.87	6.39	262	25.52	220	8.90	239	36
37,200	111	4.2	211	9.0	303	3.02	4.18	(154.00)	—		(4.24)	353	(6.61)	444	29
35,000	119	3.5	251	14.4	155	3.31**	2.26	1.42	8.83	227	30.30	198	(0.25)	404	20
32,000	132	13.6	12	18.8	56	5.61	5.36	1.99	10.92	187	3.16	322	1.93	380	42
35,000	118	—		—		(2.45)	9.01	2.86‡	—		(11.85)	383	8.27	249	28
26,884†	154	—		—		(24.77)	4.59	3.81	—		(17.84)	399	(0.63)	410	33
30,042	140	—		—		(2.43)	5.55**	3.32	—		51.42	96	7.76	264	30
38,500	107	6.6	95	16.1	112	2.75	3.66	2.16	2.44	313	(2.51)	350	(9.99)	450	43
29,900†	141	0.3	423	0.6	426	0.26**	4.40	(0.19)	—		13.02	272	10.43	192	33
35,831	116	15.3	4	24.7	25	5.51	5.58	0.82	20.99	45	5.57	304	20.19	38	42
29,300	144	13.9	10	20.0	46	5.42	4.93	1.85	11.35	178	7.46	293	(0.31)	405	42
25,739	162	—		—		(4.86)	2.47	1.45‡	—		8.10	292	5.65	315	26
32,753	129	6.7	90	13.9	167	8.83	9.12	2.39	13.96	126	18.30	248	11.60	166	26
40,366	99	5.1	162	14.2	159	4.64	4.00	1.78	10.06	206	76.32	39	8.73	244	20
41,000	93	2.9	292	6.9	331	2.30	4.06	2.32	(0.09)	337	(4.05)	352	2.33	372	45
27,239	153	0.2	424	0.6	427	0.26	4.50	(5.48)‡	—		19.41	244	17.80	59	26
20,688†	194	—		—		(2.68)	3.08	0.31	—		4.43	318	10.97	178	33
24,300	168	—		—		(2.85)	(2.44)	1.11**	—		178.49	5	(1.11)	417	40
53,000	66	1.8	349	4.6	377	1.85	4.10	1.86	(0.05)	336	21.11	237	4.01	346	22
42,800	87	9.1	49	12.5	206	12.62	19.96	0.64	34.74	6	(6.59)	361	32.75	6	45
41,000	92	1.7	361	6.7	332	0.21	7.48	1.43	(18.53)	382	(12.29)	385	9.61	219	36
31,000†	134	—		—		(5.60)	2.69	3.43	—		16.03	252	4.61	336	33
34,854	121	1.9	348	4.3	379	2.35	9.71	3.45‡	(3.77)	348	(24.21)	420	(0.33)	406	45
30,257†	138	—		—		(14.78)	11.75	2.66	—		(31.63)	436	2.97	362	33
26,000	158	3.6	247	15.4	133	4.76	5.01	1.77	10.40	197	25.10	223	3.67	349	20
40,361	100	—		—		(6.74)	3.01	2.52	—		5.80	303	7.94	257	40
53,965	64	4.4	190	13.4	180	7.23	7.61	3.72	6.87	255	35.20	168	6.91	284	23
20,900	191	—		—		(3.29)**	4.00	0.38	—		(10.86)	378	13.13	129	26
40,000	102	3.2	274	11.0	244	4.02	4.87	1.52	10.21	201	5.81	302	9.74	214	45

RANK		COMPANY	SALES	ASSETS		NET INCOME		STOCKHOLDERS' EQUITY	
1982	1981		$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK
151	167	**Murphy Oil** (El Dorado, Ark.)	2,602,455	2,989,523	101	157,759	102	901,735	162
152	172	**Abbott Laboratories** (North Chicago, Ill.)	2,602,447	2,566,909	126	289,123	53	1,310,886	108
153	148	**Levi Strauss** (San Francisco)[19]	2,572,173	1,620,869	189	126,575	130	969,992	154
154	151	**St. Regis Paper** (New York)	2,555,949	2,852,141	106	45,028	234	1,402,275	94
155	150	**Singer** (Stamford, Conn.)	2,553,300	1,421,800	202	(2,900)**	437	435,500	267
156	185	**Baker International** (Orange, Calif.)[7,20]	2,535,102	2,482,382	128	248,642	60	1,182,070	122
157	*	**Swift Independent** (Chicago)[11]	2,488,159	288,662	471	25,334	316	96,994	465
158	194	**Northrop** (Los Angeles)	2,472,900	1,352,500	207	5,400	411	493,900	242
159	157	**Hercules** (Wilmington, Del.)	2,468,971	2,001,354	165	98,414**	150	1,078,911	138
160	158	**Dana** (Toledo)	2,422,937	1,984,472	166	51,611	222	1,018,853	144
161	132	**AMAX** (Greenwich, Conn.)	2,415,500	5,089,600	51	(390,100)	487	2,358,200	50
162	142	**Cooper Industries** (Houston)	2,393,989	2,036,547	159	135,135	122	1,265,646	113
163	169	**Owens-Corning Fiberglas** (Toledo)	2,373,473	1,897,914	191	29,686	298	654,841	199
164	175	**Kellogg** (Battle Creek, Mich.)	2,367,115	1,297,354	215	227,789	64	884,711	166
165	171	**Revlon** (New York)	2,350,985	2,272,806	143	111,140	140	950,748	157
166	105	**Northwest Industries** (Chicago)	2,306,600	2,002,000	164	184,600	84	740,400	188
[illegible]	176	**Scott Paper** (Philadelphia)	2,293,436	2,382,363	137	74,457	184	1,290,677	112
[illegible]	166	**Whirlpool** (Benton Harbor, Mich.)	2,271,305	1,261,642	220	139,015	118	875,074	167
169	159	**Pennzoil** (Houston)	2,268,511	3,226,310	91	188,713	81	1,180,013	123
170	168	**McGraw-Edison** (Rolling Meadows, Ill.)	2,259,909	1,622,908	188	58,166**	204	580,174	219
171	164	**American Petrofina** (Dallas)	2,242,445	1,166,022	237	54,401	212	563,103	222
172	173	**Gillette** (Boston)	2,238,979	1,667,230	184	135,100	123	721,433	191
173	*	**Wilson Foods** (Oklahoma City)[9]	2,232,600	284,836	458	16,694**	352	83,339	477
174	156	**NL Industries** (New York)	2,213,520	2,283,629	142	188,784	80	1,150,837	127
175	174	**Ogden** (New York)	2,202,244	1,691,884	182	58,470	203	540,059	233
176	186	**Times Mirror** (Los Angeles)	2,200,399	2,135,594	152	139,874	117	988,260	151
177	202	**Grumman** (Bethpage, N.Y.)	2,156,286	999,234	257	32,600	286	320,840	321
178	165	**American Standard** (New York)	2,124,519	1,519,930	197	35,583	268	608,338	210
179	163	**General Tire & Rubber** (Akron, Ohio)[19]	2,061,659	1,741,548	176	19,436	339	1,013,626	146
180	187	**Superior Oil** (Houston)	2,040,518	4,993,235	52	223,423	67	2,308,102	54
181	178	**Gould** (Rolling Meadows, Ill.)	2,021,200¶	1,594,200	192	92,800	156	887,500	164
182	180	**Engelhard** (Edison, N.J.)	2,018,885	775,524	296	64,811	195	411,522	278
183	182	**MAPCO** (Tulsa)	1,992,947	1,723,025	177	73,822	185	582,191	218
184	184	**White Consolidated Industries** (Cleveland)	1,989,563	1,200,088	231	31,760	290	482,468	251
185	191	**Jim Walter** (Tampa, Fla.)[21]	1,984,050	2,562,799	127	6,131	408	694,182	195
186	177	**Uniroyal** (Middlebury, Conn.)	1,967,221	1,380,920	205	25,598	315	532,990	235
187	181	**Manville** (Denver)	1,913,229	2,236,000	145	(97,584)	471	765,000	182
188	201	**SCM** (New York)[4]	1,855,100	1,124,311	242	28,725	299	499,166	241
189	183	**Fruehauf** (Detroit)	1,852,353	1,498,092	198	(30,391)	457	477,786	253
190	231	**Sherwin-Williams** (Cleveland)	1,851,776	888,267	276	42,931	243	348,832	303
191	205	**Upjohn** (Kalamazoo, Mich.)	1,828,730	2,013,985	161	126,029	131	973,026	153
192	206	**Rohm & Haas** (Philadelphia)	1,828,027	1,365,163	206	85,605	170	807,853	171
193	193	**Olin** (Stamford, Conn.)	1,823,137	1,636,027	186	53,305	216	805,185	173
194	210	**Schering-Plough** (Kenilworth, N.J.)	1,817,900	2,428,900	131	183,500	85	1,326,800	105
195	189	**J.P. Stevens** (New York)[11]	1,814,315	1,066,572	246	22,284	329	487,241	246
196	211	**Sterling Drug** (New York)	1,796,153	1,332,957	210	131,970	128	860,912	168
197	242	**Crown Central Petroleum** (Baltimore)	1,772,468	643,055	323	7,016	404	192,151	394
198	199	**Central Soya** (Fort Wayne, Ind.)[21]	1,753,142	543,642	348	19,467	338	309,259	326
199	229	**Harris** (Melbourne, Fla.)[4]	1,719,028	1,417,566	203	75,545	182	596,748	213
200	196	**International Minerals & Chemicals** (Northbrook Ill.)[4]	1,711,300¶	1,941,900	168	137,400	119	1,010,200	148

*Indicates that a corporation was not among the 500 in 1981. ¶Includes sales from discontinued operations of at least 10%; see the explanation of "sales" on page 254. N.A. Not available. **Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 254. †Average for the year; see the reference to "employees" on page 254. ‡Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 254. [19]Figures are for fiscal year ended November 30, 1982. [20]Figures include Envirotech (1981 rank: 485), acquired March 2, 1982. [21]Figures are for fiscal year ended August 31, 1982.

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS				INDUSTRY CODE
		SALES		STOCKHOLDERS' EQUITY					1972-82 GROWTH RATE		1982		1972-82 AVERAGE		
NUMBER	RANK	PERCENT	RANK	PERCENT	RANK	1982/$	1981/$	1972/$	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	
6,856	398	6.1	114	17.5	85	4.28	4.39	0.41	26.43	17	(21.14)	412	10.80	186	29
32,145	130	11.1	23	22.1	32	2.37	2.01	0.36	20.74	50	46.52	118	18.54	49	42
45,000	81	4.9	169	13.0	188	3.05	4.15	0.58	18.06	78	47.34	110	16.24	67	23
26,000	159	1.8	352	3.2	396	1.29	5.19	1.95	(4.05)	349	(16.49)	394	3.38	355	26
55,000	56	—		—		(0.49)**	1.98	4.82	—		37.70	157	(5.66)	448	36
25,525	164	9.8	35	21.0	39	3.60	3.36	0.26	30.06	10	(38.58)	448	11.72	163	45
5,748	408	1.0	399	26.1	18	5.07	N.A.	N.A.	—		—		—		20
35,500	117	0.2	427	1.1	420	0.36	3.31	0.86	(8.34)	366	47.35	109	30.80	8	41
21,598	182	4.0	220	9.1	294	2.22**	3.09	1.75	2.41	314	27.93	208	1.75	384	28
29,000	148	2.1	334	5.1	372	1.43	3.25	1.54	(0.74)	341	23.22	230	11.87	158	40
13,896	252	—		—		(6.53)	3.31	1.75	—		(52.17)	463	4.12	344	10
30,679	135	5.6	138	10.7	256	2.76	6.02	0.64	15.74	102	(41.60)	453	15.20	89	45
21,931	179	1.3	385	4.5	378	0.98	1.63	1.21	(2.09)	343	71.99	49	6.42	300	32
19,290†	207	9.6	39	25.7	22	2.98	2.69	0.83	13.64	131	25.13	222	10.80	185	20
31,900	133	4.7	176	11.7	225	2.45	4.10	1.44	5.46	275	4.79	313	1.13	391	43
36,500	115	8.0	66	24.9	24	8.75	14.20	2.01	15.85	101	(44.87)	459	14.56	104	33
39,600	104	3.2	266	5.5	357	1.61	3.22	1.11	3.79	294	32.80	181	7.82	261	26
18,949	209	6.1	112	15.9	122	3.83	3.46	1.91	7.21	248	78.93	36	6.94	281	36
8,900	335	8.3	61	16.0	118	3.60	4.23	1.20	11.61	171	(22.24)	414	13.31	125	29
29,000	149	2.6	312	10.0	274	3.51**	5.11	2.56	3.21	300	14.59	260	6.23	306	36
2,530	487	2.4	319	9.7	281	5.03	6.88	2.35	7.91	240	12.58	274	12.77	137	29
30,200	139	6.0	118	18.7	62	4.45	4.11	2.54	5.77	268	39.86	140	1.92	381	34
8,800	338	0.7	407	20.0	47	3.30**	N.A.	N.A.	—		—		—		20
16,800	222	8.5	59	16.4	110	2.90	4.69	0.77	14.18	120	(51.26)	462	14.11	114	28
32,875†	128	2.7	309	10.8	248	3.13	4.86	1.09	11.13	184	14.06	264	17.90	54	37
27,319	151	6.4	105	14.2	160	4.09	4.40	1.25	12.59	151	40.70	138	12.74	138	27
27,300	152	1.5	375	10.2	271	2.33	1.45	(9.33)	—		79.09	35	23.52	18	41
39,200	105	1.7	358	5.8	355	1.30	4.07	0.58	8.41	235	8.24	290	23.02	21	37
32,000	131	0.9	400	1.9	411	0.80	4.42	3.08	(12.61)	373	46.46	119	9.44	226	30
6,780	391	10.9	24	9.7	280	1.75	2.84	(0.03)‡	—		(21.49)	413	8.26	250	10
24,770†	167	4.6	185	10.5	263	2.15	2.68	1.55	3.33	299	73.35	46	11.57	167	36
7,271	382	3.2	271	15.7	125	2.41	2.46	N.A.	—		35.30	166	—		33
6,632	393	3.7	239	12.7	197	2.67	3.51	0.71	14.16	121	(16.71)	396	6.11	309	29
23,179	174	1.6	365	6.6	336	2.10	4.34	2.22	(0.55)	339	37.62	159	12.04	153	36
19,600	203	0.3	421	0.9	423	0.29	1.34**	2.49	(19.35)	383	94.83	21	6.43	299	26
20,800	193	1.3	384	4.8	374	0.78	1.62**	1.55	(6.64)	360	71.02	53	1.87	382	30
21,000	190	—		—		(5.14)	1.53	2.66	—		(26.51)	429	(4.54)	442	32
25,500	165	1.5	368	5.8	359	3.01	5.80	0.02‡	65.10	2	45.74	120	11.84	159	28
22,190	176	—		—		(2.47)	1.74	3.06	—		57.86	77	7.03	279	40
21,101	187	2.3	324	12.3	212	2.02	1.54	0.80	9.70	212	104.53	14	9.89	207	28
21,190	186	6.9	84	13.0	190	4.18	6.04	1.58	10.22	200	(9.47)	373	(0.44)	407	42
11,541	282	4.7	183	10.6	258	6.63	7.21	3.62	6.24	265	32.46	182	1.96	379	28
17,500	217	2.9	286	6.6	335	2.26	3.88	(2.17)‡	—		2.92	324	15.23	86	28
25,700	163	10.1	34	13.8	169	3.39	3.31	1.45	8.86	226	46.62	115	(2.35)	430	42
33,900	124	1.2	386	4.6	376	1.54	(1.59)	0.40‡	14.43	118	41.88	135	11.50	168	22
24,062	170	7.3	79	15.3	134	2.17	2.15	1.18	6.28	264	5.87	301	(0.94)	415	42
1,690	493	0.4	418	3.7	390	0.92	0.34	0.27	13.04	141	5.40	307	14.52	106	29
8,447	345	1.1	393	6.3	345	1.28	1.31	1.05	2.00	320	45.57	123	7.34	275	20
26,400	157	4.4	196	12.7	199	2.42	3.37	0.54	16.18	95	(7.89)	366	15.83	75	36
8,400	346	8.0	65	13.6	175	5.13	5.63	0.82	20.12	56	7.25	294	14.92	97	28

RANK		COMPANY	SALES	ASSETS		NET INCOME		STOCKHOLDERS' EQUITY	
1982	1981		$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK
201	215	**Emhart** (Farmington, Conn.)	1,710,400	1,002,200	256	80,200	176	484,300	249
202	255	**ConAgra** (Omaha)[10,22]	1,705,169	488,570	362	32,873	284	156,451	430
203	208	**Marmon Group** (Chicago)	1,697,439	1,074,422	245	54,164	214	393,552	284
204	227	**Heublein** (Farmington, Conn.)[4]	1,697,082*	1,176,108	235	102,820	148	616,034	207
205	179	**Colt Industries** (New York)	1,691,893¶	1,190,224	233	(161,358)	480	443,450	262
206	198	**Williams Companies** (Tulsa)	1,691,315	2,369,791	139	34,333	274	1,029,411	142
207	202	**Anderson Clayton** (Houston)[4]	1,680,723	909,192	271	55,414	210	543,231	231
208	190	**Koppers** (Pittsburgh)	1,675,384	1,192,924	232	(31,131)	458	559,055	224
209	239	**Baxter Travenol Laboratories** (Deerfield, Ill.)	1,671,445	1,792,710	174	186,885	82	1,061,009	139
210	207	**Squibb** (Princeton, N.J.)	1,660,766	1,929,712	169	153,636	108	1,095,819	135
211	236	**Chesebrough-Pond's** (Greenwich, Conn.)	1,623,190	1,043,420	250	125,265	132	625,082	205
212	219	**General Signal** (Stamford, Conn.)	1,622,136	1,221,580	225	107,775	142	804,075	176
213	217	**Stauffer Chemical** (Westport, Conn.)	1,618,235	2,189,085	149	123,547	134	1,084,674	137
214	232	**Natomas** (San Francisco)	1,617,200	2,832,909	109	44,000	238	1,089,506	136
215	220	**Foster Wheeler** (Livingston, N.J.)	1,614,856	942,004	265	57,164	207	356,627	301
216	214	**Ethyl** (Richmond, Va.)	1,614,626	1,523,896	196	94,166	155	804,849	174
217	188	**Allis-Chalmers** (West Allis, Wis.)	1,609,992	1,204,421	229	(206,981)	483	421,938	275
218	213	**Hughes Tool** (Houston)	1,595,945	2,360,946	140	147,599	114	1,255,890	114
219	192	**A.E. Staley Manufacturing** (Decatur, Ill.)[7]	1,588,114	1,142,610	240	62,612	200	514,669	239
220	223	**Cabot** (Boston)[7]	1,587,658	1,319,114	213	88,007	167	642,630	201
221	200	**Cummins Engine** (Columbus, Ind.)	1,587,476	1,281,804	216	7,704	398	490,495	244
222	226	**Corning Glass Works** (Corning, N.Y.)	1,578,700	1,797,700	173	74,500	183	1,016,400	145
223	228	**Air Products & Chemicals** (Allentown, Pa.)[7]	1,568,916	2,169,505	150	170,408	95	918,188	160
224	244	**Hershey Foods** (Hershey, Pa.)	1,565,736	888,071	277	94,168	154	532,495	236
225	238	**Joseph E. Seagram & Sons** (New York)[9,23]	1,563,888*	4,482,270	59	236,977	61	2,638,082	46
226	233	**National Can** (Chicago)	1,541,543	785,016	293	34,104	275	335,418	310
227	209	**Wheelabrator-Frye** (Hampton, N.H.)	1,535,290	1,700,693	180	98,700	149	781,176	181
228	222	**Union Camp** (Wayne, N.J.)	1,526,014	2,045,012	157	124,021	133	1,139,087	128
229	258	**Gannett** (Rochester, N.Y.)	1,519,514	1,574,140	193	180,507	89	930,858	158
230	212	**Gold Kist** (Atlanta)[4]	1,517,226	480,391	365	N.A.[13]		108,115	462
231	225	**American Hoechst** (Somerville, N.J.)[24]	1,506,309	1,241,692	222	3,084	421	549,250	226
232	218	**National Distillers & Chemical** (New York)	1,499,000*	1,708,400	179	79,100	178	1,007,400	149
233	235	**Lear Siegler** (Santa Monica, Calif.)[4]	1,487,505	909,697	270	72,295	187	439,275	265
234	265	**Farmers' Union Central Exchange** (St. Paul)[7]	1,470,631	712,181	306	N.A.[13]		307,109	327
235	252	**Pitney Bowes** (Stamford, Conn.)	1,455,280	1,338,044	209	83,120	174	547,353	227
236	230	**Westvaco** (New York)[11]	1,449,664	1,342,998	208	63,093	198	755,927	185
237	•	**Tribune** (Chicago)	1,431,358	1,570,297	194	23,922	322	605,863	211
238	240	**Great Northern Nekoosa** (Stamford, Conn.)	1,429,700	1,481,800	199	78,500	179	805,400	172
239	247	**Geo. A. Hormel** (Austin, Minn.)[11]	1,426,596	488,859	361	28,051	303	245,570	363
240	197	**Amstar** (New York)[4]	1,421,912	666,619	314	40,095	249	386,763	289
241	271	**R.R. Donnelley & Sons** (Chicago)	1,404,206	968,709	262	91,175	161	624,986	206
242	254	**Hammermill Paper** (Erie, Pa.)	1,395,950	993,691	259	33,952**	278	384,749	290
243	257	**Crown Cork & Seal** (Philadelphia)	1,351,859	840,599	282	44,732	237	559,826	223
244	261	**Lever Brothers** (New York)[25]	1,350,850	474,700	368	(1,948)	435	212,800	384
245	234	**Asarco** (New York)	1,350,695	2,153,064	151	(74,080)‡	464	967,068	155
246	272	**Knight-Ridder Newspapers** (Miami)	1,327,657	1,051,286	249	102,931	147	763,744	183
247	241	**U.S. Gypsum** (Chicago)	1,324,838	1,135,443	241	43,890	239	705,394	193
248	249	**Blue Bell** (Greensboro, N.C.)[7]	1,321,119	739,186	303	37,258	261	430,741	269
249	267	**Witco Chemical** (New York)	1,305,418	661,679	316	29,842	297	298,781	331
250	251	**Polaroid** (Cambridge, Mass.)	1,293,989	1,323,591	212	23,538	324	902,857	161

•Indicates that a corporation was not among the 500 in 1981. Includes sales from discontinued operations of at least 10%; see the explanation of "sales" on page 254. N.A. Not available. *Does not include excise taxes; see the explanation of "sales" on pages 254. **Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 254. †Average for the year; see the reference to "employees" on page 254. ‡Reflects an extraordinary charge of at least 10%; see the explanations of "net income"

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS				INDUSTRY CODE
		SALES		STOCKHOLDERS' EQUITY					1972-82 GROWTH RATE		1982		1972-82 AVERAGE		
NUMBER	RANK	PERCENT	RANK	PERCENT	RANK	1982/$	1981/$	1972/$	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	
29,252	145	4.7	152	15.6	108	6.53	6.06	1.95	12.85	144	49.26	103	15.03	93	45
11,225	288	1.9	345	21.0	40	2.51	2.21	0.29‡	24.09	22	66.31	59	25.22	14	20
14,000	251	2.2	273	13.5	171	N.A.	N.A.	N.A.	—		—		—		33
34,262	122	6.1	115	16.7	104	4.72	4.09	1.04‡	16.33	94	—		—		49
20,600	195	—		—		(6.37)	4.01	0.60	—		17.15	250	22.37	22	45
6,100	397	2.0	340	3.3	394	1.15	3.67	1.97	(5.24)	355	(33.53)	437	(0.54)	409	28
14,285	246	3.3	263	10.2	259	4.47	4.09	1.29	13.23	138	4.93	310	11.81	161	20
17,334†	219	—		—		(1.67)	1.58	1.00	—		2.35	328	11.83	160	28
30,636	136	11.3	22	17.4	83	2.64	2.15	0.39	21.07	44	45.72	121	6.46	298	42
23,700	172	9.3	45	14.0	164	3.01	2.10	1.62	6.39	261	39.02	148	1.32	389	42
21,100	188	7.7	73	20.0	43	3.56	3.52	1.10	12.46	158	38.43	153	3.89	348	43
23,049	175	6.6	93	13.4	179	3.85	4.23	1.20	12.36	160	20.33	241	7.57	268	38
10,950	293	7.6	75	11.4	234	2.81	3.41	0.84	12.83	145	10.83	281	12.20	150	28
5,420	417	2.7	304	4.0	385	0.65	4.29	0.12	18.41	70	(26.46)	428	8.93	238	10
16,400†	227	3.5	248	16.0	117	1.67	1.87	0.25	20.91	46	(8.10)	369	21.84	23	34
14,000	250	5.8	127	11.7	224	2.34	2.28	1.12	7.65	244	31.92	189	11.68	164	28
21,676†	181	—		—		(17.24)	(2.86)	0.70	—		(38.58)	447	1.71	385	45
15,700	234	9.2	46	11.8	222	2.65	4.60	0.34	22.79	31	(42.87)	456	13.57	120	45
4,500	444	3.9	222	12.3	215	2.78	4.75	0.40	21.26	43	(11.91)	384	19.18	45	20
7,500	376	5.5	143	13.7	173	2.77	3.50	0.56	17.34	84	(12.38)	386	17.07	62	28
15,932	210	0.5	414	1.6	415	0.21	12.24	1.22	(16.13)	379	42.95	131	2.59	367	45
29,000	147	4.7	177	7.3	325	3.52	5.32	3.04	1.48	322	31.46	192	(1.87)	425	32
18,900	211	10.9	25	18.6	70	5.94	4.42	0.68	24.57	20	(1.19)	343	10.24	199	28
13,600	253	6.0	120	17.7	80	6.01	5.61	1.58	14.29	119	62.15	66	15.28	84	20
10,100	303	15.2	5	9.0	300	N.A.	N.A.	N.A.	—		—		—		49
10,654†	299	2.2	330	10.2	270	3.35	2.38	1.80	6.41	260	12.95	273	7.35	274	34
18,000†	215	6.4	102	12.6	200	5.18	4.78	1.02	17.64	82	(25.13)	422	7.32	276	45
16,910	221	8.1	64	10.9	246	5.10	6.95	1.71	11.55	174	27.45	211	10.77	188	26
26,000	161	11.9	19	19.4	53	3.39	3.17	0.77	15.98	98	80.20	32	12.31	147	27
9,185†	329	—		—		N.A.	N.A.	N.A.	—		—		—		20
9,339	335	0.3	428	0.6	425	N.A.	N.A.	N.A.	—		—		—		28
10,831	297	5.3	153	7.9	319	2.15	3.97	1.27	5.41	277	11.83	278	12.13	151	28
22,000	177	4.9	172	16.5	109	4.36	4.71	0.51	23.93	24	25.36	221	19.68	42	38
2,712†	484	—		—		N.A.	N.A.	N.A.	—		—		—		29
26,475	15[illegible]	3.7	135	15.2	130	4.32	3.78	1.02	15.53	104	89.41	26	14.19	108	44
14,760	242	4.4	201	8.3	312	2.40	3.95	0.54	16.09	96	14.60	259	12.80	136	26
19,300	206	1.7	360	3.9	386	3,218.0	11,774.0	N.A.	—		—		—		27
12,200†	266	5.5	144	9.7	278	4.82	5.85	1.34	13.66	129	3.06	323	10.36	194	26
7,005	386	2.0	342	11.4	233	2.92	2.84	0.82	13.54	132	59.38	73	16.14	68	20
9,243†	327	2.8	296	10.4	266	4.31	8.04	1.88	8.65	231	4.44	317	13.28	127	20
16,000†	228	6.5	98	14.6	150	4.80	4.20	1.37	13.36	135	61.37	67	14.17	110	27
12,214	265	2.4	318	8.8	304	3.49**	5.57	0.46‡	22.46	35	19.24	245	12.50	144	26
13,311	254	3.2	262	6.0	317	3.15	4.45	1.58	7.14	250	(1.67)	347	1.08	392	34
5,200	423	—		—		N.A.	N.A.	N.A.	—		—		—		43
10,900†	295	—		—		(3.88)‡	1.54	1.84	—		15.05	255	9.80	210	33
20,000	199	7.8	70	13.5	178	3.14	3.09	1.00	12.12	165	66.68	58	8.50	246	27
15,700†	233	3.3	261	6.3	330	2.61	4.49	2.78	(0.63)	340	87.90	76	14.80	101	32
29,000	146	2.8	295	8.6	306	2.92	3.70	1.26	8.77	228	31.04	194	10.78	187	23
7,800	371	2.3	327	10.0	273	3.15	4.14	1.43	8.22	236	20.82	240	11.17	176	29
14,540	244	1.8	350	2.6	403	0.73	0.95	1.30	(5.61)	356	28.02	207	(12.75)	453	38

and "earnings per share" on page 254. [22] Figures include Peavey (1981 rank: 352), acquired July 20, 1982. [23] Wholly owned by Seagram. [24] Wholly owned by Hoechst AG. [25] Wholly owned by Unilever.

RANK		COMPANY	SALES	ASSETS		NET INCOME		STOCKHOLDERS' EQUITY	
1982	1981		$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK
251	248	**Black & Decker Manufacturing** (Towson, Md.)[7]	1,292,747¶	995,339	258	(76,602)	467	480,419	258
252	256	**Armstrong World Industries** (Lancaster, Pa.)	1,285,590	903,031	272	19,808	336	598,577	212
253	283	**Mid-America Dairymen** (Springfield, Mo.)	1,270,677	281,906	460	N.A.[13]		96,805	467
254	264	**Norton** (Worcester, Mass.)	1,264,070	1,007,949	253	19,324	340	543,703	229
255	291	**Johnson Controls** (Milwaukee)[7]	1,251,522	861,204	279	53,839	215	382,349	292
256	274	**AMP** (Harrisburg, Pa.)	1,243,438	1,076,322	244	118,948	135	714,497	192
257	269	**Zenith Radio** (Glenview, Ill.)	1,239,200	682,900	309	(21,800)	455	272,900	344
258	299	**Pacific Resources** (Honolulu)	1,234,809	545,099	346	9,798	389	86,438	475
259	216	**PACCAR** (Bellevue, Wash.)	1,229,916	806,719	286	37,292	260	584,278	217
260	326	**CBI Industries** (Oak Brook, Ill.)	1,210,244	978,565	260	88,186	165	442,830	263
261	301	**Tektronix** (Beaverton, Ore.)[10]	1,195,748	1,042,287	251	79,453	177	630,449	204
262	294	**McGraw-Hill** (New York)	1,193,587	945,396	264	110,018	141	541,588	232
263	253	**Chromalloy American** (St. Louis)	1,177,253¶	888,766	275	(42,380)	462	323,068	317
264	341	**Wang Laboratories** (Lowell, Mass.)[4]	1,159,309	1,187,865	234	107,139	145	577,110	220
265	272	**Louisiana Land & Exploration** (New Orleans)	1,155,100	1,682,000	183	76,300	181	838,400	170
266	296	**Federal Co.** (Memphis)[10]	1,149,861	310,820	450	17,562	350	182,743	401
267	295	**Parker-Hannifin** (Cleveland)[4]	1,145,081	798,580	288	57,680	206	449,867	259
268	298	**International Multifoods** (Minneapolis)[6]	1,147,659	480,585	364	33,153	281	213,148	383
269	245	**AMF** (White Plains, N.Y.)	1,147,418	890,069	274	12,271	375	424,491	273
270	324	**Cameron Iron Works** (Houston)[4]	1,147,255	1,329,017	211	152,583	111	586,629	215
271	282	**Airco** (Montvale, N.J.)[7,36]	1,134,802	1,239,943	223	42,985	242	673,287	196
272	330	**Mattel** (Hawthorne, Calif.)[27]	1,134,252	647,434	320	39,102	254	235,830	368
273	•	**Mobay Chemical** (Pittsburgh)[28]	1,131,492	1,212,785	226	(8,359)‡	446	491,954	243
274	260	**Brunswick** (Skokie, Ill.)	1,129,343	787,040	290	192,342	79	364,177	298
275	224	**Crane** (New York)	1,126,398	857,177	280	(3,343)	440	380,995	293
276	268	**Richardson-Vicks** (Wilton, Conn.)[4]	1,115,600	778,400	294	66,900	191	485,900	248
277	300	**Becton Dickinson** (Paramus, N.J.)[7]	1,113,921	1,089,615	243	76,692	180	584,360	216
278	276	**West Point-Pepperell** (West Point, Ga.)[21]	1,110,573	651,401	319	43,067	240	389,162	286
279	387	**National Semiconductor** (Santa Clara, Calif.)[10]	1,104,095	785,042	292	(10,694)	451	336,607	306
280	275	**Libbey-Owens-Ford** (Toledo)	1,098,597	830,328	285	16,003	357	477,120	254
281	262	**Fairchild** (Germantown, Md.)	1,093,261	912,263	269	35,280	269	237,359	367
282	297	**Joy Manufacturing** (Pittsburgh)[7]	1,080,845	847,914	281	83,708	173	524,631	237
283	325	**Storage Technology** (Louisville, Colo.)	1,079,235	1,206,455	228	64,738	196	543,308	230
284	277	**Smith International** (Newport Beach, Calif.)	1,072,861	1,162,883	238	82,310	175	664,838	198
285	395	**Mitchell Energy & Development** (The Woodlands, Tex.)[27]	1,064,844	1,699,833	181	115,217	130	388,174	287
286	278	**GATX** (Chicago)	1,064,300	2,737,700	114	30,000	295	486,600	247
287	289	**Square D** (Palatine, Ill.)	1,056,981	804,762	287	71,700	188	478,497	252
288	304	**G.D. Searle** (Skokie, Ill.)	1,036,900	1,269,700	217	140,400	116	664,900	197
289	293	**Perkin-Elmer** (Norwalk, Conn.)[9]	1,036,774	869,812	278	62,669	199	482,703	250
290	311	**Dover** (New York)	1,035,212	611,536	331	89,787	164	448,988	260
291	292	**Ex-Cell-O** (Troy, Mich.)[19]	1,027,123	697,633	308	48,202	227	415,904	277
292	259	**Clark Equipment** (Buchanan, Mich.)	1,020,695	935,848	266	(154,504)	477	428,295	272
293	250	**Timken** (Canton, Ohio)	1,014,261	1,014,760	252	(3,001)	439	789,177	178
294	284	**Alumax** (San Mateo, Calif.)	1,003,981	1,158,979	239	38,697	256	609,786	209
295	318	**Morton Norwich Products** (Chicago)[4]	999,093¶	746,935	302	136,832	120	383,887	291
296	355	**Monfort of Colorado** (Greeley, Colo.)[21]	995,941	180,546	492	18,907**	343	54,804	489
297	286	**Harsco** (Wormleysburg, Pa.)	978,563	670,867	313	36,121	265	387,733	288
298	285	**U.S. Industries** (Stamford, Conn.)	971,367	676,563	310	31,164	293	400,245	281
299	315	**Stanley Works** (New Britain, Conn.)	962,778	636,497	324	37,801	258	389,892	285
300	305	**Sundstrand** (Rockford, Ill.)	961,573	895,314	273	69,300	189	489,001	245

•Indicates that a corporation was not among the 500 in 1981. ¶Includes sales from discontinued operations of at least 10%; see the explanation of "sales" on page 254. N.A. Not available. **Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 254. †Average for the year; see the reference to "employees" on page 254. ‡Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 254. [26]Wholly owned by BOC Financial. [27]Figures are for fiscal year ended January 31, 1982. [28]Wholly owned by Bayer AG.

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS				INDUSTRY CODE
		SALES		STOCKHOLDERS' EQUITY					1972-82 GROWTH RATE		1982		1972-82 AVERAGE		
NUMBER	RANK	PERCENT	RANK	PERCENT	RANK	1982/$	1981/$	1972/$	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	
15,700	232	—		—		(1.82)	1.56	0.71	—		24.46	227	(3.90)	430	[illegible]
20,824†	192	1.5	369	3.3	395	0.79	1.88	1.60	(6.81)	361	54.37	87	2.15	376	22
2,986	480	—		—		N.A.	N.A.	N.A.	—		—		—		20
21,400	184	1.5	372	3.6	391	1.13	5.57	1.35	(1.76)	342	(19.71)	404	12.61	141	32
20,500	197	4.3	204	14.1	162	3.83	3.43	1.18	12.49	156	81.23	98	12.39	146	36
19,750	201	9.6	40	16.6	105	3.31	3.75	0.90	13.91	128	36.66	160	6.59	295	36
24,000	171	—		—		(1.15)	0.82	2.58	—		79.78	33	(4.28)	439	36
759	496	0.8	403	11.3	237	0.79	1.32	0.36**	8.18	238	(37.40)	444	5.34	326	29
6,985	388	3.0	281	6.4	342	4.11	9.39	3.28	2.23	316	18.53	254	12.45	145	40
10,000	306	7.3	80	19.9	49	5.06	4.73	1.70	11.52	175	(6.02)	357	4.15	343	34
23,231	173	6.6	92	12.6	202	4.28	4.34	0.69	19.94	60	6.81	298	9.87	208	38
14,196	247	9.2	48	20.3	42	4.40	3.94	0.90	17.20	86	48.88	104	21.43	28	27
16,600†	223	—		—		(3.06)	0.65	1.87	—		(45.63)	460	(1.11)	418	34
19,760	200	9.2	47	18.6	69	1.76	1.36	0.08	36.22	3	77.83	38	36.80	3	44
1,718	4[illegible]	6.6	94	9.1	295	2.01	3.82	1.74	1.45	323	(22.63)	416	(2.87)	431	10
13,000†	258	1.5	373	9.6	284	2.14	2.47	0.66	12.48	157	38.41	154	20.43	36	20
19,350	205	5.0	163	12.8	193	2.31	2.75	0.38	10.13	202	(2.36)	349	8.14	251	34
7,759	372	2.9	288	15.6	131	4.07	3.49	1.40	11.26	182	65.63	122	12.10	152	20
17,273	220	1.1	394	2.9	400	0.53	1.84	2.96	(15.80)	378	(36.09)	440	(5.06)	443	47
11,070	290	13.3	14	26.0	21	5.02	3.62	0.37**	29.79	11	(54.22)	465	—		45
11,860	276	3.8	233	6.4	341	N.A.	N.A.	N.A.	—		—		—		28
16,000†	230	3.4	254	16.6	107	1.68	0.12	(1.84)	—		53.90	88	2.99	361	47
6,040	400	—		—		N.A.	N.A.	N.A.	—		—		—		28
18,800	212	17.0	2	52.8	3	13.68	3.01	1.86	22.08	38	39.59	143	0.04	402	47
11,827	277	—		—		(0.33)	5.17	1.15	—		(26.86)	431	15.85	74	33
11,000	292	6.0	122	13.8	170	2.74	3.31	1.56	5.79	266	3.56	319	3.58	351	42
21,200	185	6.9	85	13.1	187	3.63	3.61	1.24	11.34	180	(8.71)	372	1.67	386	38
21,500	183	3.9	226	11.1	242	4.27	4.23	1.08	14.74	113	75.62	43	17.35	60	22
38,267	109	—		—		(0.47)	2.37	0.13	—		15.04	256	11.28	171	36
14,581	243	1.5	378	3.4	393	1.01	0.63	4.22	(13.32)	375	34.18	174	4.54	337	32
13,305	255	3.2	269	14.9	146	1.90	3.48	0.54	13.41	133	26.19	216	19.19	44	41
9,706	313	7.7	71	16.0	121	4.27	4.48	0.90	16.85	87	(28.50)	434	11.42	170	45
15,830	231	6.0	121	11.9	218	1.88	2.61	0.24**	22.86	30	(39.29)	449	13.11	131	44
9,486	322	7.7	74	12.4	208	3.61	5.80	0.45	23.15	29	(36.41)	442	10.91	182	45
3,800	462	10.8	26	29.7	11	2.41	2.10	0.11	36.16	4	(26.08)	425	17.72	58	10
8,900	333	2.8	298	6.2	351	2.41	5.26	3.23	(2.89)	346	(7.71)	364	0.96	393	37
21,100	189	6.8	89	15.0	142	2.61	3.82	1.53	5.49	274	25.00	225	4.77	334	36
15,200	239	13.5	13	21.1	37	2.77	1.90	1.01	10.62	195	33.53	178	4.78	333	42
14,100	249	6.0	117	13.0	189	1.45	1.81	0.39	14.03	123	6.94	295	5.43	322	38
12,297	264	8.7	55	20.0	48	2.52	2.69	0.40	20.21	55	(5.13)	354	19.16	46	45
14,100†	248	4.7	180	11.6	229	3.28	3.71	0.53‡	19.88	61	23.07	231	13.27	128	45
12,703	259	—		—		(12.10)	2.35	3.01	—		4.81	311	(1.51)	421	45
15,520	236	—		—		(0.27)	9.01	3.97	—		(16.99)	397	7.92	258	45
7,240	384	3.9	228	6.3	343	N.A.	N.A.	N.A.	—		—		—		33
10,400	301	13.7	11	35.6	7	10.13	3.90	1.95	17.91	81	50.31	99	9.94	205	28
3,277	474	1.9	346	34.5	8	3.84**	3.23**	1.17	12.62	150	189.07	4	5.64	316	20
11,800	278	3.7	242	9.3	289	1.85	3.15	0.86	7.96	239	2.30	329	15.18	91	34
14,831	241	3.2	272	7.8	320	1.20	(2.76)	2.33	(6.42)	358	21.17	236	2.00	378	45
15,548†	235	3.9	224	9.6	283	1.40	2.10	0.86	4.99	281	46.34	125	9.35	228	34
13,100	256	7.2	81	14.2	158	3.77	5.23	0.61	19.98	59	9.05	288	14.13	112	41

RANK		COMPANY	SALES	ASSETS		NET INCOME		STOCKHOLDERS' EQUITY	
1982	1981		$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK
301	246	**Phelps Dodge** (New York)	957,795	2,013,897	162	(74,296)	465	977,991	152
302	349	**General Instrument** (New York)[6]	957,059	772,215	297	90,029	163	509,896	240
303	280	**Pennwalt** (Philadelphia)	952,400	756,442	300	21,718	331	365,758	297
304	307	**BASF Wyandotte** (Parsippany, N.J.)[29]	944,200	734,900	304	5,400	412	302,100	328
305	290	**Rexnord** (Milwaukee)[11]	936,552	757,405	299	7,154	403	372,085	295
306	•	**Hanson Industries** (Iselin, N.J.)[7,30]	935,723	337,628	438	15,225**	361	131,907	448
307	344	**New York Times** (New York)	933,692	761,479	298	84,257	213	342,11[illegible]	304
308	317	**National Gypsum** (Dallas)	929,506	833,780	284	14,093	369	471,514	255
309	327	**Quaker State Oil Refining** (Oil City, Pa.)	928,933	511,854	356	38,568	257	260,910	352
310	316	**Willamette Industries** (Portland, Ore.)	928,745	966,328	263	(9,093)‡	448	400,395	280
311	303	**CF Industries** (Long Grove, Ill.)	918,916	1,007,919	254	N.A.[13]		422,850	274
312	323	**Adolph Coors** (Golden, Colo.)	915,258*	1,007,914	255	40,148	248	783,212	180
313	340	**Thomas J. Lipton** (Englewood Cliffs, N.J.)[25]	912,913	552,498	345	56,566	208	333,514	313
314	319	**Anchor Hocking** (Lancaster, Ohio)	903,574	583,018	337	12,321	374	289,514	334
315	363	**Intel** (Santa Clara, Calif.)	899,812	1,056,452	247	30,046	294	551,853	225
316	358	**Ball** (Muncie, Ind.)	889,100	514,200	354	34,500	273	232,600	370
317	350	**General Cinema** (Chestnut Hill, Mass.)[11]	885,935	592,809	334	48,036	228	169,157	417
318	343	**National Service Industries** (Atlanta)[21]	884,859	427,815	391	50,628	223	298,249	332
319	378	**VF** (Wyomissing, Pa.)	879,528	455,983	378	91,623	160	309,816	325
320	329	**Springs Industries** (Fort Mill, S.C.)[31]	874,512	561,097	343	43,054	241	395,825	283
321	309	**Cyclops** (Pittsburgh)	873,165	411,437	396	(11,921)	452	178,343	403
322	312	**Louisiana-Pacific** (Portland, Ore.)	872,190	1,241,790	221	(1,800)	434	723,320	190
323	360	**G. Heileman Brewing** (La Crosse, Wis.)	870,841*	502,046	357	45,654	232	194,073	392
324	370	**Tyler** (Dallas)	870,501	461,828	375	10,195	386	162,906	426
325	348	**Cluett Peabody** (New York)	867,394	434,725	386	23,677	323	215,806	382
326	389	**Clorox** (Oakland, Calif.)[4]	867,141	539,563	349	45,120	233	281,356	340
327	328	**Lone Star Industries** (Greenwich, Conn.)	866,755	1,439,130	201	14,737	364	467,795	256
328	359	**Trane** (La Crosse, Wis.)	865,738	635,608	326	23,332	325	280,123	341
329	357	**Hart Schaffner & Marx** (Chicago)[19]	863,231	480,793	363	31,870	289	242,490	366
330	338	**Masco** (Taylor, Mich.)	855,740	1,222,159	224	92,150**	158	589,392	214
331	374	**National Cooperative Refinery Assoc.** (McPherson, Kans.)[4]	842,601	408,744	398	N.A.[13]		141,435	440
332	302	**Cessna Aircraft** (Wichita)[7]	831,528	611,859	330	18,078	348	351,966	302
333	334	**CertainTeed** (Valley Forge, Pa.)	827,086	616,903	328	(7,141)	444	287,456	338
334	332	**Midland-Ross** (Cleveland)	820,446	664,570	315	1,250	431	267,153	348
335	336	**Potlatch** (San Francisco)	820,180	1,175,779	236	22,533	327	535,020	234
336	320	**Reichhold Chemicals** (White Plains, N.Y.)	814,911	366,868	422	4,675	415	168,281	419
337	368	**Brockway** (Brockway, Pa.)[32]	814,823	430,941	388	15,392	360	221,807	377
338	308	**NVF** (Yorklyn, Del.)	810,600	1,265,311	218	(92,463)	470	149,931	436
339	379	**Data General** (Westboro, Mass.)[7]	805,910	786,483	291	24,658**	318	429,043	271
340	337	**Lubrizol** (Wickliffe, Ohio)	801,284	643,744	322	47,561	230	462,044	257
341	391	**EG&G** (Wellesley, Mass.)	800,843	270,393	467	40,157	247	175,201	407
342	375	**Washington Post** (Washington, D.C.)	800,824	501,223	358	52,413	220	258,843	353
343	381	**Geosource** (Houston)[7]	799,734	629,510	327	48,403	225	274,921	342
344	321	**ACF Industries** (New York)	785,223	1,200,148	230	33,076	282	375,331	294
345	354	**Champion Spark Plug** (Toledo)	783,748	590,924	335	26,807	309	361,143	300
346	362	**Outboard Marine** (Waukegan, Ill.)[7]	778,002	592,824	333	33,982	277	315,006	324
347	447	**James River Corp. of Virginia** (Richmond)[15]	772,682	478,116	366	22,353	328	159,952	427
348	351	**Big Three Industries** (Houston)	767,785	1,055,313	248	86,812	168	609,792	208
349	313	**Interlake** (Oak Brook, Ill.)	767,300	655,792	318	5,752	410	323,281	316
350	372	**Miles Laboratories** (Elkhart, Ind.)[28]	761,911	674,843	311	10,131	388	293,792	333

•Indicates that a corporation was not among the 500 in 1981. N.A. Not available. *Does not include excise taxes; see the explanation of "sales" on page 254. **Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 254. †Average for the year; see the reference to "employees" on page 254. ‡Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 254. [29]Wholly owned by BASF AG. [30]Wholly owned by Hanson Trust PLC. [31]Named changed from Springs Mills April 20, 1982. [32]Name changed from Brockway Glass April 28, 1982.

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS				INDUSTRY CODE
		SALES		STOCKHOLDERS' EQUITY					1972-82 GROWTH RATE		1982		1972-82 AVERAGE		
NUMBER	RANK	PERCENT	RANK	PERCENT	RANK	1982/$	1981/$	1972/$	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	
9,678	315	—		—		(2.29)	2.31	4.01	—		(13.46)	393	1.37	387	33
26,700	155	9.4	44	17.7	82	3.01	2.49	0.19	31.82	7	13.43	268	21.18	31	36
9,530	318	2.3	329	5.9	354	2.10	4.02	1.58	2.88	304	18.79	247	6.62	292	28
3,983	461	0.6	411	1.8	412	N.A.	N.A.	N.A.	—		—		—		28
12,000	272	0.8	404	1.9	410	0.35	1.92	1.01	(10.04)	379	(19.29)	405	3.40	350	45
22,000†	178	1.6	362	11.5	230	N.A.	N.A.	N.A.	—		—		—		20
8,900	334	5.8	130	15.9	123	4.31	6.03	1.17	13.93	127	51.63	95	18.97	47	27
11,444	284	1.5	374	3.0	399	0.89	2.41	1.89	(7.25)	362	33.65	177	12.74	139	32
4,678	438	4.2	212	16.8	148	1.77	1.26	0.87	7.36	245	32.12	186	(3.36)	436	29
8,180	356	—		—		(0.60)‡	1.88	1.46	—		34.17	175	11.98	157	26
2,090	490	—		—		N.A.	N.A.	N.A.	—		—		—		28
8,660	343	4.4	197	5.1	371	1.15	1.48	N.A.	—		20.91	239	—		49
5,672†	409	6.2	108	17.0	96	N.A.	N.A.	N.A.	—		—		—		20
14,500	245	1.4	381	4.3	381	1.25	2.89	1.97	(4.45)	353	22.36	233	6.75	287	32
19,400	204	3.3	258	5.4	365	0.63	0.61	0.09**	21.86	40	73.33	45	25.90	12	34
9,642	317	3.9	225	14.8	147	3.16	2.76	0.88	13.64	130	76.02	40	16.08	69	34
12,559	262	5.4	145	28.4	11	2.36	2.00	0.47	17.41	83	63.39	65	15.96	73	49
16,600	224	5.7	134	17.0	94	4.08	3.93	1.56	10.09	205	53.60	89	10.42	193	36
20,600	196	10.4	31	29.6	12	5.65	5.28	0.90	20.12	57	100.87	17	14.99	94	22
18,500	213	4.9	168	10.9	247	4.83	4.50	1.53	12.18	164	72.98	47	17.06	63	22
8,248	351	—		—		(2.60)	4.31	2.15	—		(28.69)	408	8.93	237	33
13,000	257	—		—		(0.05)	2.62	0.98	—		57.73	78	12.73	140	26
5,400	418	5.2	155	23.5	27	3.45	2.08	0.42	23.59	32	67.23	57	31.30	7	49
9,500	321	1.2	388	6.3	347	1.08	3.41**	0.67	4.89	283	(16.59)	395	15.40	81	28
19,088	208	2.7	302	11.0	245	2.73	3.28	1.48	6.87	256	46.97	112	7.37	273	23
5,600	414	5.2	159	16.0	116	1.90	1.66	4.30	(7.84)	363	128.06	11	(0.77)	412	43
8,968	332	1.7	355	8.2	397	0.05	4.53	2.16	(31.38)	389	17.29	249	8.78	241	33
11,900	275	2.7	305	8.3	313	2.28	3.65	1.56	3.87	293	5.06	309	3.09	358	45
25,000	166	3.7	241	13.1	185	2.77	3.16	1.21	8.88	225	65.16	60	9.59	231	23
10,200	302	10.8	27	15.6	128	1.78**	1.73	0.33	18.36	72	55.53	85	8.78	242	34
831	498	—		—		N.A.	N.A.	N.A.	—		—		—		29
11,542†	281	2.2	332	5.1	370	0.94	3.19	0.82	1.38	324	10.92	280	9.25	232	41
7,800	370	—		—		(8.86)	(1.14)	2.38**	—		59.07	74	3.16	357	33
9,900	310	0.2	431	0.5	429	0.10	2.06	0.71	(17.80)	381	1.58	333	14.74	103	45
8,717	341	2.7	300	4.3	382	0.87	2.25	1.12	(2.49)	344	28.58	204	15.19	90	26
4,490	445	0.6	409	2.8	401	0.25	1.70	1.18	(14.37)	376	71.25	51	8.96	235	28
11,750	279	1.9	347	6.9	330	2.05	2.07	1.98	0.35	331	25.91	217	5.89	310	33
8,400	347	—		—		(0.97)	0.23	0.20	—		(40.63)	451	18.37	51	33
15,210	238	3.1	278	5.7	361	2.25**	4.72**	0.43	16.42	89	(30.88)	424	0.88	396	44
4,270	453	5.9	124	10.3	268	1.21	2.36	0.65	6.41	259	(15.37)	392	1.28	390	28
18,200	214	5.0	164	22.9	29	1.38	1.21	0.16	24.04	23	157.48	7	28.56	10	38
5,300	421	6.5	96	20.2	43	3.70	2.32	0.51	21.92	39	79.32	34	21.30	29	29
8,066	363	6.1	113	17.7	81	N.A.	N.A.	N.A.	—		—		—		38
7,856	369	4.2	208	8.8	305	3.74	5.23	2.27	5.12	279	(13.13)	387	6.63	291	37
12,500	263	3.4	255	7.4	334	0.70	2.79	1.06	(4.06)	350	53.81	88	3.20	356	36
9,144	330	4.4	199	10.8	250	4.03	3.22	3.75	0.72	328	48.61	105	1.79	383	45
7,900	366	2.9	287	14.0	165	1.95	1.86	0.20	25.57	18	98.83	22	—		26
5,325	419	11.3	21	14.2	156	2.05	2.57	0.31	20.79	49	(17.91)	400	12.90	133	28
8,720	340	0.7	406	1.8	413	0.92	7.55	2.17	(8.22)	365	2.42	327	14.09	115	33
8,300	350	1.3	383	3.4	392	N.A.	N.A.	2.85	—		—		—		42

RANK		COMPANY	SALES	ASSETS		NET INCOME		STOCKHOLDERS' EQUITY	
1982	1981		$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK
351	401	**Kane-Miller** (Tarrytown, N.Y.)	761,153	161,981	490	3,934	419	77,982	480
352	322	**Cincinnati Milacron** (Cincinnati)	759,638	660,514	317	12,238	376	333,490	314
353	428	**Household Manufacturing** (Prospect Heights, Ill.)[33]	759,500	671,000	312	13,400	370	448,000	261
354	288	**Wheeling-Pittsburgh Steel** (Pittsburgh)	755,083	1,207,161	227	(58,769)	463	431,278	268
355	439	**E-Systems** (Dallas)	754,355	318,373	449	33,779	267	190,970	395
356	346	**Freeport-McMoRan** (New York)	747,888	1,657,588	185	65,946	192	735,130	189
357	382	**Dean Foods** (Franklin Park, Ill.)	747,215	213,421	483	18,355	347	91,863	471
358	347	**Federal-Mogul** (Southfield, Mich.)	735,344	560,977	344	28,414	301	270,238	347
359	310	**Kaiser Steel** (Fontana, Calif.)	734,935	913,311	268	2,665	426	265,119	349
360	414	**Dow Jones** (New York)	730,673	594,741	332	88,103	166	333,995	312
361	393	**Bell & Howell** (Chicago)	723,062	393,178	407	(2,930)	436	172,111	412
362	367	**Vulcan Materials** (Birmingham, Ala.)	719,407	710,319	307	54,660	211	429,872	270
363	408	**McCormick** (Hunt Valley, Md.)[19]	717,678	399,679	403	24,969	317	187,294	399
364	426	**Todd Shipyards** (New York)[8]	715,918	332,021	443	31,703	292	116,983	456
365	416	**Avery International** (Pasadena, Calif.)[19]	712,222	425,951	393	26,520	308	186,446	400
366	333	**Newmont Mining** (New York)	711,605	1,946,750	167	48,553	226	1,320,739	107
367	371	**Figgie International** (Willoughby, Ohio)	708,331	464,889	370	26,058	313	187,613	398
368	364	**Dayco** (Dayton, Ohio)[11]	704,509	437,224	384	1,613	430	136,113	446
369	419	**Gerber Products** (Fremont, Mich.)[6]	702,693	383,599	411	40,975	245	260,990	351
370	380	**Trinity Industries** (Dallas)[8]	695,640	371,726	417	39,045	255	173,727	411
371	366	**A.O. Smith** (Milwaukee)	694,192	419,942	394	(16,761)	453	198,469	393
372	405	**National Starch & Chemical** (Bridgewater, N.J.)[25]	691,951	418,401	395	37,050	264	271,186	345
373	331	**Scovill** (Waterbury, Conn.)	691,399	460,490	376	19,938	335	169,763	415
374	400	**Varian Associates** (Palo Alto, Calif.)[7]	691,199	524,141	353	26,500	311	274,746	343
375	475	**Bucyrus-Erie** (South Milwaukee, Wis.)	687,344	750,579	301	25,698	314	401,143	279
376	386	**Bemis** (Minneapolis)	681,363	384,785	410	10,169	387	176,858	406
377	356	**Tecumseh Products** (Tecumseh, Mich.)	679,886	464,749	372	40,960	246	363,714	299
378	398	**Insilco** (Meriden, Conn.)	677,887	612,386	329	14,823	363	234,196	369
379	421	**Economics Laboratory** (St. Paul)[4]	670,355	438,335	383	32,906	283	219,801	378
380	431	**Collins & Aikman** (New York)[6]	669,122	340,238	436	18,827	344	189,101	397
381	399	**Interstate Bakeries** (Kansas City, Mo.)[16,34]	668,314	188,664	488	2,743**	424	50,574	492
382	387	**Genesco** (Nashville)[9]	664,805	356,271	430	1,099	432	70,519	485
383	434	**Sun Chemical** (New York)	664,237	527,333	352	1,948	429	165,584	422
384	438	**Capital Cities Communications** (New York)	663,580	776,013	295	96,317	152	544,267	228
385	402	**Magic Chef** (Cleveland, Tenn.)[6]	663,399	367,062	421	9,100	393	128,986	451
386	384	**Dow Corning** (Midland, Mich.)	662,755	838,347	283	52,785	218	442,023	264
387	376	**Hoover** (North Canton, Ohio)	662,549	372,377	416	3,953	418	171,099	413
388	411	**Maryland Cup** (Owings Mills, Md.)[7]	655,875	398,970	404	31,744	291	250,436	361
389	397	**Pabst Brewing** (Milwaukee)	649,164*	408,939	397	2,693	425	254,255	357
390	407	**Nalco Chemical** (Oak Brook, Ill.)	643,863	464,868	371	58,116	205	336,488	307
391	365	**Sybron** (Rochester, N.Y.)	639,594	545,049	347	6,615	407	243,492	365
392	442	**Briggs & Stratton** (Wauwatosa, Wis.)[4]	635,666	366,656	423	39,353	253	252,240	360
393	413	**H.H. Robertson** (Pittsburgh)	629,994	318,090	447	28,329	302	151,807	435
394	403	**GAF** (New York)	623,236	468,322	369	59,229**	202	181,919	402
395	361	**Bangor Punta** (Greenwich, Conn.)[7]	622,320	534,593	351	3,065	422	288,893	376
396	345	**Amsted Industries** (Chicago)[7]	618,428	476,233	367	17,800	349	371,349	296
397	342	**AM International** (Chicago)[9]	613,535	389,088	408	(83,034)	468	(83,971)	498
398	406	**Cone Mills** (Greensboro, N.C.)	608,201	423,680	392	12,806	372	335,241	311
399	•	**Fuqua Industries** (Atlanta)	607,450	428,457	390	19,589**	337	75,263	481
400	435	**Kellwood** (St. Louis)[15]	606,830	323,371	445	8,198	397	84,615	476

•Indicates that a corporation was not among the 500 in 1981. N.A. Not available *Does not include excise taxes; see the explanation of "sales" on page 254. **Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 254. †Average for the year; see the reference to "employees" on page 254. ‡Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 254. [33] Formed by merger of Wallace Murray (1981 rank: 428) and King-Seeley Thermos, wholly owned subsidiaries of Household International, December 31, 1982. [34] Named changed from DPF November 16, 1981.

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS				INDUSTRY CODE
		SALES		STOCKHOLDERS' EQUITY					1972-82 GROWTH RATE		1982		1972-82 AVERAGE		
NUMBER	RANK	PERCENT	RANK	PERCENT	RANK	1982/$	1981/$	1972/$	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	
3,299	476	0.5	412	4.9	373	1.48	1.42	0.84	7.18	249	14.24	262	9.41	227	20
10,049	304	1.6	363	3.7	389	0.53	2.68	0.08	20.81	48	1.34	335	17.78	56	45
11,500	283	1.8	351	3.0	398	N.A.	N.A.	N.A.	—		—		—		34
8,036†	360	—		—		(15.98)	14.28	3.33**	—		(50.40)	461	(1.60)	423	33
12,142	267	4.7	174	18.7	61	2.42	1.67	0.32	22.42	36	103.88	15	41.83	1	36
5,000	429	8.8	53	9.0	301	0.95	2.30	0.27	13.41	134	(28.90)	435	13.61	119	10
3,734	463	2.5	317	20.1	44	3.03	2.67	0.15	35.04	5	96.93	20	27.83	3	20
12,090	270	3.9	227	10.5	261	2.20	2.82	1.34	5.08	280	39.20	145	14.86	100	34
7,387†	378	0.4	419	1.0	422	0.29	(61.53)	(1.48)‡	—		(55.53)	[illegible]	10.06	202	31
5,893	403	12.1	17	26.4	17	1.39	1.14	0.33	15.46	105	35.01	170	15.69	78	27
11,235	286	—		—		(0.52)	3.83	3.97	—		62.98	63	(1.39)	422	36
5,851†	405	7.6	76	12.7	195	4.73	6.76	1.45	12.55	153	4.52	315	20.21	37	10
6,900†	390	3.5	252	13.3	181	2.02	2.50	0.63	12.36	161	40.51	136	0.16	421	31
11,300†	285	4.4	191	27.1	16	6.01	4.49**	(1.05)	—		14.62	258	11.43	169	37
8,180	355	3.8	234	14.4	154	2.98	2.95	0.90	13.73	147	33.87	176	9.47	219	36
9,950	309	6.8	87	3.7	388	1.76	14.30**	1.72	0.23	334	30.20	200	12.31	148	33
12,699	260	3.6	243	13.9	166	4.18	4.03	0.91	16.47	92	27.77	210	13.09	134	45
10,500	300	0.2	426	1.2	418	0.25	(0.49)‡	1.23‡	(14.73)	377	(5.86)	356	2.55	368	30
11,021†	291	5.8	128	15.7	126	4.60	3.46‡	2.40	6.73	258	36.01	164	9.73	213	32
4,800	435	5.6	140	22.5	30	2.36	2.95	0.22	26.78	14	(20.00)	406	21.26	30	34
9,298†	326	—		—		(3.42)	1.11	2.02	—		(14.42)	391	(0.79)	411	42
4,824	432	5.4	152	13.7	174	N.A.	N.A.	N.A.	—		—		—		28
16,411	226	2.9	289	11.7	223	2.10	(0.80)	1.87	1.17	326	39.73	141	6.37	294	36
12,600	261	3.8	229	9.6	282	2.93	(0.45)	0.52	18.95	64	115.78	12	15.36	82	36
5,856	404	3.7	237	6.4	340	1.26	1.84	0.83	4.26	288	(3.88)	351	7.83	262	45
8,381	348	1.5	376	5.7	360	2.70	4.70	2.03	2.89	303	43.97	126	8.65	245	26
7,869†	367	6.0	119	11.3	239	7.49	10.81	4.29	5.73	269	34.38	173	9.55	222	45
8,200	353	2.2	331	6.3	344	0.91	2.10	0.84‡	0.80	327	36.17	162	14.00	117	28
7,300	381	4.9	170	15.0	143	2.44	2.31	0.79	11.94	167	75.98	41	(0.93)	414	43
9,400	323	2.8	299	10.0	277	1.71	1.16	1.60	0.67	329	99.71	19	8.88	240	22
12,095	269	0.4	417	5.4	366	0.60**	(5.39)	(5.62)	—		(13.98)	389	5.34	337	20
16,000	229	0.2	429	1.6	416	(0.09)	1.16**	0.41‡	—		(33.91)	438	(10.12)	451	31
6,400	396	0.3	422	1.2	419	0.26	3.47	0.94**	(12.06)	371	(23.12)	417	12.03	155	29
7,240	385	14.5	7	17.7	79	7.25	6.12	1.15	20.22	53	62.47	64	14.90	98	27
7,341	379	1.4	380	7.3	326	0.78	1.72	1.29	(4.91)	354	135.94	9	5.31	335	36
5,940†	402	8.0	69	11.9	217	N.A.	N.A.	N.A.	—		—		—		28
14,956	240	0.6	408	2.3	405	0.32	(1.53)	2.23	(17.68)	380	30.65	195	(4.28)	440	36
10,000†	308	4.8	173	12.7	198	3.10	3.01	0.89	13.29	137	32.24	184	9.62	218	26
3,313	472	0.4	416	1.1	421	0.33	(2.88)	2.93	(19.62)	384	39.17	146	(8.38)	447	49
4,600	441	9.0	50	17.3	86	1.46	4.04	1.01	3.78	295	19.88	243	9.76	212	28
12,109	268	1.0	398	2.7	402	0.49	2.53	1.94**	(12.86)	374	(8.14)	370	(2.77)	433	38
8,138	357	6.2	109	15.6	129	2.72	1.74	1.57	5.65	271	58.23	75	6.80	286	45
7,261	383	4.5	188	18.7	65	5.57	5.94	1.21	16.49	91	(6.20)	359	16.13	66	34
4,500	443	9.5	42	32.6	9	3.71**	1.62	1.75	7.80	241	0.90	336	1.35	388	29
10,000†	305	0.5	413	1.4	417	0.34	6.06	(0.15)	—		2.27	330	6.37	291	41
7,900	365	2.9	291	4.8	375	1.65	4.68	1.10	4.14	290	(27.29)	432	14.88	99	33
11,699	280	—		—		(8.11)	(26.71)	3.07	—		(42.46)	456	(21.57)	454	38
10,800	298	2.1	337	3.8	387	2.32	5.87	1.34	5.64	272	16.03	253	17.29	61	22
7,843	375	3.3	270	26.0	19	4.90**	(2.24)	1.87	10.11	204	40.31	138	7.59	273	44
17,400	218	1.4	382	9.7	279	2.35	1.02	1.87	2.31	315	136.34	8	7.06	278	23

RANK		COMPANY	SALES	ASSETS		NET INCOME		STOCKHOLDERS' EQUITY	
1982	1981		$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK
401	478	**American Greetings** (Cleveland)[6]	605,970	491,854	360	32,843	285	227,786	374
402	430	**Foxboro** (Foxboro, Mass.)	602,437	462,267	374	34,849	272	322,222	318
403	409	**Scott & Fetzer** (Lakewood, Ohio)[19]	600,008	403,790	401	27,092	306	194,085	391
404	410	**Nashua** (Nashua, N.H.)	597,712	274,287	465	(40,500)	461	93,112	469
405	392	**Ferro** (Cleveland)	595,830	348,553	433	10,277	385	164,876	424
406	464	**M/A-Com** (Burlington, Mass.)[7]	595,490	566,387	340	33,933	279	315,080	323
407	490	**Frederick & Herrud** (Southfield, Mich.)[10]	591,726	110,039	497	1,997	428	37,887	496
408	443	**Stokely-Van Camp** (Indianapolis)[10]	591,071	266,395	469	15,156	362	140,717	442
409	445	**Hoover Universal** (Ann Arbor, Mich.)	586,424	370,417	419	16,887	355	174,538	409
410	420	**Hyster** (Portland, Ore.)[27]	583,649	513,709	355	34,067	276	318,036	322
411	•	**Apple Computer** (Cupertino, Calif.)[7]	583,061	357,787	428	61,306	201	257,092	356
412	369	**Southwest Forest Industries** (Phoenix)	582,745	718,137	305	(27,389)	456	226,590	375
413	429	**Wm. Wrigley Jr.** (Chicago)	581,459	319,655	446	35,811	266	246,495	362
414	•	**Fleetwood Enterprises** (Riverside, Calif.)[15]	581,432	188,793	487	9,153	392	109,062	461
415	472	**Brown-Forman Distillers** (Louisville, Ky.)[15]	578,099*	575,134	338	56,771	169	397,035	282
416	441	**Dennison Manufacturing** (Framingham, Mass.)	577,281	358,501	427	20,637	334	195,203	389
417	448	**Armstrong Rubber** (New Haven, Conn.)[7]	575,877	342,396	434	17,048	351	136,421	445
418	453	**Harcourt Brace Jovanovich** (New York)	575,255	428,772	389	3,294	420	165,501	423
419	377	**Moore McCormack Resources** (Stamford, Conn.)	568,154¶	970,773	261	6,645	406	340,731	305
420	452	**Rohr Industries** (Chula Vista, Calif.)[9]	565,880	295,693	452	18,492	345	98,825	464
421	436	**Idle Wild Foods** (Worcester, Mass)[21]	561,698	106,878	498	8,823	394	57,935	487
422	353	**Revere Copper & Brass** (New York)	561,574	341,026	435	(157,108)	479	31,623	495
423	404	**United Merchants & Manufacturers** (New York)[6]	561,446	396,230	405	95,[illegible]88**	153	158,585	429
424	415	**Mohasco** (Amsterdam, N.Y.)	559,614	337,588	439	(7,612)**	445	190,768	396
425	471	**Tyson Foods** (Springdale, Ark.)[7]	559,021	235,578	477	9,406	391	55,765	488
426	•	**Tyco Laboratories** (Exeter, N.H.)[10]	552,160	443,506	381	23,200	326	136,859	444
427	470	**Deluxe Check Printers** (St. Paul)	549,519	349,756	432	64,887	194	257,614	355
428	444	**Gates Learjet** (Wichita)	548,461	288,891	455	14,649	366	126,248	450
429	480	**Westmoreland Coal** (Philadelphia)	548,059	401,425	402	8,423	395	204,423	386
430	468	**Oak Industries** (Rancho Bernardo, Calif.)	545,720	636,180	325	4,103	417	254,115	358
431	457	**Sonoco Products** (Hartsville, S.C.)	542,492	358,963	425	28,587	300	217,604	380
432	•	**Holly** (Dallas)[9]	539,628	173,574	493	10,516	383	65,804	486
433	486	**Fort Howard Paper** (Green Bay, Wis.)	537,030	644,696	321	92,400	157	458,417	266
434	432	**M. Lowenstein** (New York)	536,650	335,690	442	15,462	359	169,365	416
435	461	**Raychem** (Menlo Park, Calif.)[6]	534,949	451,809	380	37,245	262	262,296	350
436	422	**Eagle-Picher Industries** (Cincinnati)[19]	531,452	367,418	420	11,390	377	218,799	379
437	455	**Consolidated Papers** (Wisconsin Rapids, Wis.)	530,296	484,237	379	40,003	251	386,359	308
438	451	**American Bakeries** (New York)	525,783	112,599	496	(10,301)	450	33,846	494
439	463	**Dexter** (Windsor Locks, Conn.)	522,204	337,494	440	24,496	319	174,133	410
440	417	**Dan River** (Danville, Va.)	519,124	406,764	399	(8,726)	447	196,569	388
441	•	**Dr Pepper** (Dallas)	516,136	338,884	436	12,474	373	153,898	432
442	476	**Arvin Industries** (Columbus, Ind.)	513,905	310,211	451	10,866	378	177,212	404
443	•	**Sun-Diamond Growers of California** (Stockton, Calif.)[7]	511,390	275,978	461	N.A.[11]		52,231	490
444	•	**Coleco Industries** (Hartford)	510,380	285,865	457	44,896	236	92,653	470
445	465	**Federal Paper Board** (Montvale, N.J.)	509,987	565,594	341	16,065	356	168,676	418
446	433	**Bausch & Lomb** (Rochester, N.Y.)	509,736	463,625	373	29,944	296	253,422	359
447	•	**Datapoint** (San Antonio)[9]	508,466	571,750	339	2,455	427	326,150	315
448	•	**MEI** (Minneapolis)	502,722	325,791	444	32,038	288	136,988	443
449	466	**Sheller-Globe** (Toledo)[7]	500,171	356,438	429	14,103	368	152,483	434
450	425	**Handy & Harman** (New York)	499,119	360,559	424	8,353	396	127,622	449

•Indicates that a corporation was not among the 500 in 1981. ¶Includes sales from discontinued operations of at least 10%; see explanation of "sales" on page 254. N.A. Not available. *Does not include excise taxes; see the explanation of "sales" on page 254. **Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 254. †Average for the year; see the reference to "employees" on page 254. ‡Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 254.

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS				INDUSTRY CODE
		SALES		STOCKHOLDERS' EQUITY					1972-82 GROWTH RATE		1982		1972-82 AVERAGE		
NUMBER	RANK	PERCENT	RANK	PERCENT	RANK	1982/$	1981/$	1972/$	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	
16,424	225	5.4	147	14.4	153	2.40	1.94	0.89	10.43	196	90.53	25	0.49	397	27
11,150	289	5.8	133	10.8	249	2.81	3.60	0.48	20.10	58	4.65	314	13.43	122	38
13,439	237	4.5	187	14.0	166	4.04	4.01	2.41	5.30	278	32.18	185	5.34	325	36
5,625	411	—		—		(5.66)	2.00	2.15	—		(34.70)	439	(11.38)	452	38
8,570†	344	1.7	353	6.2	349	1.37	3.30	2.09	(4.14)	351	(1.51)	344	3.44	354	28
8,739	339	5.7	136	10.8	253	0.88	1.05	0.16	18.59	67	(7.82)	365	21.64	26	36
2,700	485	0.3	420	7.2	327	0.56	(0.48)	0.81	(3.62)	347	(9.60)	374	(1.84)	416	20
4,800	433	2.6	313	10.8	252	4.59	2.51	1.91	9.16	219	55.37	86	14.94	96	20
6,948†	389	2.7	301	9.2	292	1.79	2.60	1.29	3.33	298	32.00	187	9.98	204	34
6,704	392	5.8	126	10.7	255	5.61	7.14	1.74	12.42	159	13.77	267	8.07	253	45
3,391	471	10.5	30	23.5	26	1.06	0.70	N.A.	—		35.02	169	—		44
5,100	427	—		—		(3.63)	1.40‡	1.83	—		(22.42)	415	3.52	352	26
5,600	413	6.2	110	14.5	152	4.57	3.61	2.33	6.97	254	21.69	234	5.93	236	20
6,500	394	1.6	366	8.4	311	0.82	0.22	1.09	(2.81)	345	221.42	3	8.05	254	37
2,784	483	15.0	6	21.9	33	3.43	2.65	0.59	19.25	63	1.56	334	13.35	124	49
6,200	354	3.6	246	10.6	260	2.10	3.05	1.14	6.30	263	13.21	271	11.24	172	26
5,168	425	3.0	283	12.5	207	4.31	4.41	0.49**	24.29	21	90.83	24	10.99	177	30
8,243	352	0.6	410	2.0	408	0.36	2.70	1.23	(11.56)	370	6.19	300	5.65	314	27
2,900	481	1.2	389	2.0	409	0.78	6.01	0.65	2.66	309	(19.24)	402	21.74	24	10
8,000	361	3.3	264	18.7	63	2.85	1.21	1.19	9.13	220	13.95	266	(2.15)	429	41
1,709	492	1.6	367	15.2	137	4.92	4.43	1.28	14.66	114	(11.11)	379	—		20
5,168†	426	—		—		(27.61)	1.64	(1.70)‡	—		(59.33)	468	(3.31)	435	33
9,705	314	17.0	3	60.2	2	14.12**	(0.48)**	2.50	15.90	65	84.53	30	(3.03)	446	22
10,916	294	—		—		(1.17)**	2.30	2.33	—		30.28	199	(0.49)	408	25
9,200	328	1.7	357	16.9	100	2.43	0.55	0.38	20.39	51	81.98	31	25.24	13	20
7,470	377	4.2	209	17.0	97	2.56	2.69	0.76**	12.91	142	47.04	111	12.01	156	26
9,824	311	11.8	20	25.2	23	2.83	2.33	0.53	18.24	76	46.88	113	10.88	183	27
3,169	478	2.7	308	11.6	227	1.27	1.95	0.83**	4.35	287	(41.90)	454	15.30	83	41
3,294	473	1.5	371	4.1	384	1.14	(2.17)	0.65‡	5.78	267	(37.64)	445	8.08	255	10
11,985	274	0.8	405	1.6	414	0.25	2.23	0.49	(6.51)	359	(54.68)	466	11.19	173	36
9,506	320	5.3	154	13.1	186	2.63	3.49	0.76	13.22	139	39.55	144	15.75	76	26
394	500	1.9	343	16.0	120	1.25	0.67	(0.08)**	—		(20.93)	410	21.13	32	29
4,620	440	17.2	1	21.1	38	3.43	3.08	0.49	21.48	42	19.95	242	14.80	102	26
10,000	307	2.9	290	9.1	293	4.63	5.22	1.82‡	9.79	210	43.90	127	9.32	229	22
8,100	359	7.0	83	14.2	157	4.07	4.01	0.38	26.76	15	13.25	270	7.20	277	36
7,000	387	2.1	333	5.2	369	1.17	1.88	1.14	0.24	333	10.42	282	6.67	290	45
5,072†	428	7.5	78	11.9	219	3.68	5.08	0.67	18.57	66	29.53	202	25.08	15	26
8,100	358	—		—		(4.30)	(3.33)	0.97**	—		(17.40)	398	7.96	256	20
5,200	424	4.7	181	14.1	163	2.65	2.57	0.65	15.09	110	21.22	235	10.68	190	28
12,000	271	—		—		(1.64)	3.31	0.86**	—		62.48	63	12.03	154	22
4,000	460	2.4	320	8.1	316	0.58	1.48	0.43	3.04	302	8.66	289	(3.12)	434	49
7,966	364	2.1	336	6.1	352	1.40	1.64	1.31	0.67	330	35.27	167	3.64	365	40
2,237	488	—		—		N.A.	N.A.	N.A.	—		—		—		20
4,700	436	8.8	54	48.5	5	2.90	0.51	0.34	23.91	25	434.90	1	3.45	353	47
4,200	454	3.2	276	9.5	286	2.62	4.61	1.24	7.77	242	9.54	285	13.76	118	26
7,700	373	5.9	125	11.8	220	2.48	0.82	0.74**	12.86	143	(10.52)	376	15.57	80	38
8,822	337	0.5	415	0.7	424	0.12	2.45	(0.42)	—		(64.14)	469	—		44
4,300	452	6.4	104	23.4	28	1.90	1.60	0.17	27.30	12	87.12	28	32.85	4	49
9,000	331	2.8	297	9.2	291	1.83	2.67	1.13	4.94	282	74.45	45	6.48	297	40
4,447	446	1.7	359	6.5	339	0.61	1.71	0.20‡	11.80	169	12.36	277	25.07	16	33

RANK		COMPANY	SALES	ASSETS		NET INCOME		STOCKHOLDERS' EQUITY	
1982	1981		$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK
451	479	**Kerr Glass Manufacturing** (Los Angeles)	498,710	275,665	462	7,578	400	109,106	460
452	•	**Universal Foods** (Milwaukee)[7]	494,068	218,947	482	18,425	346	104,844	463
453	481	**Warnaco** (Bridgeport, Conn.)	493,590	253,921	472	24,126	320	141,333	441
454	489	**Georgia Kraft** (Rome, Ga.)	493,584	586,651	336	35,268	270	288,612	336
455	460	**Fieldcrest Mills** (Eden, N.C.)	491,955	315,868	448	10,417	384	166,570	421
456	474	**Palm Beach** (Cincinnati)	491,018	219,981	481	9,524	390	81,947	478
457	•	**Echlin** (Branford, Conn.)[21,35]	490,567	388,221	409	26,532	310	211,918	385
458	440	**Carpenter Technology** (Reading, Pa.)[4]	487,964	435,206	385	33,162	280	283,362	337
459	450	**Nucor** (Charlotte, N.C.)	486,018	371,633	418	22,192	330	232,281	372
460	449	**Peabody International** (Stamford, Conn.)[7]	483,756	282,803	459	5,094	414	119,431	455
461	•	**North American Coal** (Cleveland)	482,982	924,763	267	14,688	365	87,819	473
462	•	**A.H. Robins** (Richmond, Va.)	482,324	439,983	382	48,693	224	321,085	320
463	427	**Wyman-Gordon** (Worcester, Mass.)	473,070	378,909	414	56,386	209	289,318	335
464	500	**Shakiee** (San Francisco)[7]	471,876	222,074	479	24,008	321	120,758	454
465	•	**Royal Crown Companies** (Atlanta)	469,800	244,415	475	15,951	358	116,467	457
466	496	**Knudsen** (Los Angeles)	468,076	156,486	495	5,206	413	51,351	491
467	437	**American Hoist & Derrick** (St. Paul)[19]	464,176	379,996	413	(21,793)	454	169,951	414
468	418	**H.K. Porter** (Pittsburgh)	463,845¶	240,115	476	(4,864)	442	143,845	438
469	•	**Amdahl** (Sunnyvale, Calif.)	462,243	565,320	342	6,767**	405	270,422	346
470	•	**Flowers Industries** (Thomasville, Ga.)[4]	461,062	208,774	485	16,285	354	94,530	468
471	446	**Gifford-Hill** (Dallas)	454,681	300,186	359	570	433	176,999	405
472	497	**Ceco** (Oak Brook, Ill.)	450,715	230,741	478	10,761	381	132,208	447
473	456	**Dorsey** (Chattanooga, Tenn.)	449,990¶	183,350	489	(3,970)	441	74,846	482
474	•	**Meredith** (Des Moines, Iowa)[4]	449,143	354,412	431	26,924	307	167,435	420
475	492	**Research-Cottrell** (Bedminster, N.J.)[11]	449,111	288,051	456	13,134	371	113,203	458
476	•	**Liquid Air** (San Francisco)	448,996	537,182	350	27,512	304	257,893	354
477	495	**Marion** (Mobile, Ala.)[27]	448,033	245,539	474	(10,157)	449	70,522	484
478	•	**International Flavors & Fragrances** (New York)	447,889	431,589	387	63,160	197	335,902	309
479	412	**Harnischfeger** (Brookfield, Wis.)[11]	447,461	456,853	377	(76,531)	466	145,448	437
480	498	**Illinois Tool Works** (Chicago)	446,983	394,509	406	40,090	250	301,540	330
481	434	**Masonite** (Chicago)[27]	446,092	291,053	454	(6,110)	443	153,467	433
482	•	**Maytag** (Newton, Iowa)	440,809	274,236	466	37,103	263	198,365	387
483	462	**Savannah Foods & Industries** (Savannah, Ga.)	440,539	167,020	494	20,887	333	73,023	483
484	494	**Barnes Group** (Bristol, Conn.)	439,713	275,630	463	(2,743)	436	123,438	452
485	•	**Wisconsin Dairies Cooperative** (Baraboo, Wis.)[8]	439,420	90,879	499	N.A.[13]		37,442	493
486	•	**Worthington Industries** (Columbus, Ohio)[10]	437,625	275,350	464	19,154	341	112,757	459
487	•	**Sanders Associates** (Nashua, N.H.)[9]	436,224	336,142	441	26,415	312	174,810	408
488	•	**Oxford Industries** (Atlanta)[10]	435,928	180,601	491	16,330	353	87,800	474
489	•	**Prime Computer** (Natick, Mass.)	435,826	376,167	415	44,926	235	228,907	373
490	491	**Rath Packing** (Waterloo, Iowa)[7]	434,700	64,532	500	21,668**	332	16,886	497
491	•	**Phillips-Van Heusen** (New York)[27]	431,135	209,657	484	7,377	401	95,903	466
492	•	**Snap-on Tools** (Kenosha, Wis.)	430,521	338,533	437	37,301	259	232,594	371
493	•	**Cooper Tire & Rubber** (Findlay, Ohio)	430,354	220,901	480	19,008	342	121,451	453
494	•	**Roper** (Kankakee, Ill.)[9]	430,288	189,708	486	4,471	416	79,388	479
495	•	**Media General** (Richmond, Va.)	429,409	406,191	400	32,512	287	216,011	381
496	•	**Diebold** (Canton, Ohio)	427,639	264,736	470	41,503	244	195,017	390
497	•	**Butler Manufacturing** (Kansas City, Mo.)	426,977	266,801	468	10,806	379	162,953	425
498	•	**Stone Container** (Chicago)	426,639	381,063	412	14,185	367	142,168	439
499	•	**Essex** (Baltimore)	425,892	250,065	473	10,755	382	88,135	472
500	•	**Ametek** (New York)	423,651	291,554	453	27,264	305	159,083	428
		TOTALS	1,672,219,873	1,308,732,391		61,426,041		690,159,407	

•Indicates that a corporation was not among the 500 in 1981. ¶Includes sales from discontinued operations of at least 10%; see explanation of "sales" on page 254. N.A. Not available. **Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 254. †Average for the year; see the reference to "employees" on page 254. ‡Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 254. [35]Name changed from Echlin Manufacturing January 8, 1982.

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS				INDUSTRY CODE
		SALES		STOCKHOLDERS' EQUITY					1972-82 GROWTH RATE		1982		1972-82 AVERAGE		
NUMBER	RANK	PERCENT	RANK	PERCENT	RANK	1982/$	1981/$	1972/$	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	
4,990	431	1.5	[illegible]	7.9	[illegible]	1.03	3.13	N.A.	—		3.38	[illegible]	—		32
3,585	468	3.7	238	17.6	84	2.62	1.95	0.67	14.61	116	56.89	80	17.78	57	20
9,522	319	4.9	171	13.1	[illegible]	5.17	4.83	2.10	9.42	217	73.45	34	14.53	105	23
3,235	475	7.1	82	12.2	213	N.A.	N.A.	N.A.	—		—		—		26
11,231	287	2.1	[illegible]	6.9	[illegible]	2.72	2.48	3.10	2.66	308	38.54	153	8.68	117	22
8,000	362	1.9	344	11.6	226	2.29	3.30	0.42	18.48	69	(13.13)	388	18.66	48	23
7,600	374	5.4	148	13.1	[illegible]	1.35	3.78	0.53	9.39	218	57.27	79	2.16	373	40
4,348	448	6.8	88	11.5	231	3.85	5.20	0.78	17.31	85	(8.70)	371	19.26	43	33
5,600	417	4.5	184	9.8	[illegible]	3.15	1.88	0.29	14.83	112	5.46	305	26.77	11	33
5,000†	430	1.1	396	4.3	380	0.47	1.23	0.86	(5.86)	357	31.31	193	4.23	341	45
4,557	442	3.1	290	16.7	[illegible]	4.21	6.16	0.80	18.83	66	(1.88)	342	9.58	211	10
5,600	415	10.1	33	15.2	139	1.98	1.77	0.90	8.20	237	52.25	94	(4.52)	441	42
3,200	477	14.9	18	19.3	37	2.93	2.05	0.38	24.18	16	20.92	238	—		34
1,500	494	5.1	161	19.9	50	3.80	3.85	N.A.	—		71.58	50	—		20
4,890	434	2.4	257	13.7	177	1.96	1.89	1.46	2.74	[illegible]	43.88	124	(2.59)	432	48
2,120	489	1.1	392	10.1	272	1.92	2.55	1.35	3.58	296	88.62	27	13.28	126	20
4,036	[illegible]	—		—		(2.34)	2.79	1.31	—		(34.43)	431	2.42	371	42
4,620	439	—		—		(4.49)	6.74	10.51**	—		12.50	275	18.18	52	33
5,800	407	1.5	377	2.5	404	0.28**	1.31	N.A.	—		2.38	331	—		44
9,400	324	3.5	249	17.2	88	1.72	1.51	0.37	16.61	90	75.95	42	19.79	41	20
3,600	466	0.1	432	0.3	431	0.07	3.27	1.47	(26.28)	356	(1.04)	341	5.82	318	32
7,320†	380	2.4	322	8.1	315	3.17	4.00	2.45	2.61	310	46.56	116	6.69	289	34
4,300	450	—		—		(1.32)	5.50	1.41	—		114.88	13	15.98	71	30
4,162	456	6.0	123	16.1	114	8.57	7.50‡	1.60	18.27	74	40.35	139	20.89	34	27
2,800	482	2.9	265	11.4	232	2.23	2.31	1.30	5.58	273	(1.19)	343	(13.18)	454	45
4,020	459	6.1	111	10.7	257	2.13	2.86	N.A.	—		16.29	251	—		28
435	499	—		—		(8.87)	2.08	4.17	—		(56.42)	467	15.26	85	27
3,615	464	14.1	9	18.8	58	1.73	1.81	0.58	11.55	173	46.84	114	(1.91)	427	43
4,100	457	—		—		(7.64)	2.93	0.79	—		(43.45)	458	4.33	340	45
6,500	395	9.0	52	13.3	182	3.26	3.62	1.23	10.24	199	39.14	147	4.53	338	34
4,440	447	—		—		(1.44)	6.03	5.01	—		42.68	132	4.73	335	26
4,683†	437	8.4	60	18.7	64	2.68	2.65	2.09	2.52	311	56.00	84	5.86	311	36
934	495	4.7	173	26.4	13	5.61	7.83	1.94	18.36	71	29.72	142	18.16	53	20
5,633	410	—		—		(0.38)	0.71	0.94	—		(1.65)	346	9.86	209	34
636	497	—		—		N.A.	N.A.	N.A.	—		—		—		20
4,300	451	4.4	198	17.0	92	1.55	1.85	0.14	27.18	13	9.54	284	32.76	5	33
7,859	368	6.1	116	15.1	140	3.30	2.75	0.32**	19.62	62	36.04	163	14.50	107	36
11,993	273	3.7	236	18.6	68	5.66	2.96	2.05	10.69	193	100.13	17	29.16	9	23
5,311	420	10.3	32	19.6	51	1.48	1.25	N.A.	—		46.52	117	—		44
2,544	486	5.0	166	128.3	1	7.65**	(4.93)	(3.87)	—		—		—		20
8,683	343	1.7	354	7.7	333	2.34	1.79	1.66	4.41	286	26.66	215	5.26	329	23
5,254	422	8.7	56	16.0	115	1.84	1.98	0.58	12.24	163	31.79	191	2.83	363	34
4,169	455	4.4	192	15.7	127	4.42	4.13	1.05	15.46	106	157.50	6	21.67	25	30
4,300	449	1.0	397	5.6	362	1.43	1.78	1.42	0.07	335	65.00	61	10.56	191	45
[illegible]	401	7.6	77	15.1	131	4.46	4.41	1.11	15.38	109	13.38	269	10.95	179	37
6,051	399	9.7	36	21.3	36	4.80	3.37	1.10	15.87	100	59.79	69	13.12	130	36
3,406	470	2.5	315	6.6	334	2.00	2.92	1.28	4.56	285	9.10	287	10.93	181	34
3,500	469	3.3	260	10.0	276	1.46	2.48	0.35	15.35	108	59.58	70	20.49	35	26
5,613	412	2.5	316	12.5	214	2.81	3.85	1.43	6.99	253	6.84	297	8.99	234	34
5,600	416	6.4	101	17.1	90	2.50	2.44	0.64	14.60	117	5.08	308	19.88	40	38
14,362,190															

WHO DID BEST AND WORST AMONG THE 500

TOTAL RETURN TO INVESTORS, 1982

THE TEN HIGHEST

	SALES RANK	
Coleco Industries	444	434.90%
Chrysler	29	426.31
Fleetwood Enterprises	414	221.42
Monfort of Colorado	296	189.07
American Motors	139	178.49
Cooper Tire & Rubber	493	157.50
EG&G	341	157.48
Kellwood	400	136.34
Magic Chef	385	135.94
Ford Motor	5	132.10

THE FIVE LOWEST

Datapoint	447	−64.14%
Revere Copper & Brass	422	−59.33
Marion	477	−56.42
Oak Industries	430	−54.68
Cameron Iron Works	270	−54.22

THE INDUSTRY MEDIANS

Rubber, plastic products	71.02%
Textiles, vinyl flooring	54.37
Publishing, printing	48.88
Apparel	47.16
Musical instruments, toys, sporting goods	46.75
Beverages	45.50
Soaps, cosmetics	42.64
Food	39.72
Motor vehicles	38.98
Electronics, appliances	37.66
Pharmaceuticals	32.82
Aerospace	30.70
Office equipment (includes computers)	28.82
Paper, fiber, and wood products	28.62
Glass, concrete, abrasives, gypsum	25.91
Shipbuilding, railroad and transportation equipment	11.15
Chemicals	9.53
Metal products	9.10
Measuring, scientific, photographic equipment	6.81
Industrial and farm equipment	−1.19
Petroleum refining	−10.79
Metal manufacturing	−11.60
Mining, crude-oil production	−22.63
Leather	N.A.
Furniture	N.A.
Tobacco	N.A.
Jewelry, silverware	N.A.
All Industries	21.22

TOTAL RETURN TO INVESTORS, 1972-82

THE TEN HIGHEST

	SALES RANK	
E-Systems	355	41.02%
Dean Foods	357	37.53
Wang Laboratories	264	36.80
MEI	448	32.85
Worthington Industries	486	32.76
Teledyne	141	32.75
Heileman (G.) Brewing	323	31.30
Northrop	158	30.80
Oxford Industries	488	29.16
EG&G	341	28.56

THE FIVE LOWEST

AM International	397	−21.59%
International Harvester	73	−15.07
Research-Cottrell	475	−13.18
Polaroid	250	−12.75
Nashua	404	−11.38

THE INDUSTRY MEDIANS

Aerospace	17.75%
Publishing, printing	14.17
Paper, fiber, and wood products	11.01
Metal manufacturing	10.37
Petroleum refining	10.30
Apparel	10.20
Chemicals	9.92
Mining, crude-oil production	9.80
Food	9.75
Shipbuilding, railroad and transportation equipment	9.74
Textiles, vinyl flooring	9.68
Office equipment (includes computers)	9.12
Metal products	8.54
Electronics, appliances	8.05
Rubber, plastic products	7.92
Industrial and farm equipment	7.82
Glass, concrete, abrasives, gypsum	6.59
Motor vehicles	5.44
Beverages	5.00
Pharmaceuticals	3.03
Measuring, scientific, photographic equipment	2.13
Musical instruments, toys, sporting goods	1.52
Soaps, cosmetics	− .39
Leather	N.A.
Furniture	N.A.
Tobacco	N.A.
Jewelry, silverware	N.A.
All Industries	9.34

RETURN ON STOCKHOLDERS' EQUITY

THE TEN HIGHEST

	SALES RANK	
Rath Packing	490	128.3%
United Merchants & Manufacturers	423	60.2
Brunswick	274	52.8
Lockheed	56	49.5
Coleco Industries	444	48.5
Tosco	112	43.8
Morton Norwich Products	295	35.6
Monfort of Colorado	296	34.5
GAF	394	32.6
American Home Products	76	30.4

THE INDUSTRY MEDIANS

	1982	1981
Musical instruments, toys, sporting goods	32.6%	9.2%
Pharmaceuticals	16.9	18.0
Beverages	16.7	19.2
Soaps, cosmetics	16.0	16.8
Publishing, printing	15.5	16.4
Food	15.3	14.4
Measuring, scientific, photographic equipment	12.8	15.6
Petroleum refining	12.5	16.4
Office equipment (includes computers)	12.4	13.3
Apparel	12.3	16.2
Electronics, appliances	11.7	14.3
Metal products	11.7	14.1
Aerospace	11.7	15.0
Mining, crude-oil production	9.0	17.6
Chemicals	8.6	13.5
Shipbuilding, railroad and transportation equipment	8.6	14.4
Industrial and farm equipment	8.5	13.9
Paper, fiber, and wood products	8.0	12.0
Textiles, vinyl flooring	6.3	7.8
Motor vehicles	5.1	7.6
Glass, concrete, abrasives, gypsum	4.3	9.6
Rubber, plastic products	1.9	10.4
Metal manufacturing	.0	12.4
Leather	N.A.	N.A.
Furniture	N.A.	N.A.
Tobacco	N.A.	19.5
Jewelry, silverware	N.A.	N.A.
All Industries	10.9	13.8

RETURN ON SALES

THE TEN HIGHEST

	SALES RANK	
Fort Howard Paper	433	17.2%
Brunswick	274	17.0
United Merchants & Manufacturers	423	17.0
SmithKline Beckman	131	15.3
Joseph E. Seagram & Sons	225	15.2
Brown Forman Distillers	415	15.0
Capital Cities Communications	384	14.5
Standard Oil (Ohio)	21	14.3
International Flavors & Fragrances	478	14.1
Eli Lilly	132	13.9

THE INDUSTRY MEDIANS

	1982	1981
Pharmaceuticals	9.9%	9.1%
Publishing, printing	6.5	7.1
Musical instruments, toys, sporting goods	6.1	3.4
Measuring, scientific, photographic equipment	5.9	6.9
Office equipment (includes computers)	5.9	6.1
Beverages	5.4	5.5
Soaps, cosmetics	5.2	5.0
Electronics, appliances	4.5	4.4
Chemicals	4.0	5.4
Petroleum refining	4.0	4.4
Metal products	3.8	4.4
Apparel	3.4	3.4
Food	3.3	3.3
Paper, fiber, and wood products	3.2	5.0
Industrial and farm equipment	3.2	4.6
Mining, crude-oil production	3.0	11.7
Shipbuilding, railroad and transportation equipment	2.8	4.5
Aerospace	2.8	4.0
Textiles, vinyl flooring	2.1	2.9
Motor vehicles	1.7	2.6
Glass, concrete, abrasives, gypsum	1.5	3.1
Rubber, plastic products	.9	3.0
Metal manufacturing	.0	4.4
Leather	N.A.	N.A.
Furniture	N.A.	N.A.
Tobacco	N.A.	7.9
Jewelry, silverware	N.A.	N.A.
All industries	3.6	4.6

CHANGES IN SALES

THE TEN BIGGEST INCREASES

	SALES RANK	
Coleco Industries	444	186.7%
Apple Computer	411	74.2
Tyco Laboratories	426	53.0
Mitchell Energy & Development	285	53.0
Allegheny International	142	49.7
SmithKline Beckman	131	49.5
E.I. du Pont de Nemours	8	46.1
Dr Pepper	441	41.8
Bucyrus-Erie	375	38.5
Control Data	80	38.4

THE TEN BIGGEST DECREASES

Fuqua Industries	399	57.1%
LTV	65	41.1
Republic Steel	145	37.5
Northwest Industries	166	37.3
International Harvester	73	35.5
Wheeling-Pittsburgh	354	34.4
Phelps Dodge	301	33.4
Revere Copper & Brass	422	31.6
Harnischfeger	479	30.7
Crane	275	30.1

THE INDUSTRY MEDIANS

	INCREASES
Office equipment (includes computers)	18.6%
Publishing, printing	10.0
Beverages	6.7
Soaps, cosmetics	6.1
Musical instruments, toys, sporting goods	4.0
Pharmaceuticals	3.8
Apparel	3.0
Food	2.0
Electronics, appliances	.7
	DECREASES
Metal manufacturing	21.6%
Rubber, plastic products	10.5
Industrial and farm equipment	10.2
Textiles, vinyl flooring	9.1
Shipbuilding, railroad and transportation equipment	7.9
Motor vehicles	6.9
Chemicals	6.5
Glass, concrete, abrasives, gypsum	5.3
Paper, fiber, and wood products	3.1
Petroleum refining	3.0
Measuring, scientific, photographic equipment	2.7
Metal products	2.3
Aerospace	1.8
Mining, crude-oil production	.8
Leather	N.A.
Furniture	N.A.
Tobacco	N.A.
Jewelry, silverware	N.A.

CHANGES IN PROFITS

THE TEN BIGGEST INCREASES*

	SALES RANK	
North American Coal	461	2276.2%
Warner-Lambert	119	1797.3
Miles Laboratories	350	591.5
Tosco	112	486.4
Coleco Industries	444	482.2
Mattel	272	395.1
Charter	88	356.9
Tyson Foods	425	347.0
Fleetwood Enterprises	414	275.1
Bausch & Lomb	446	201.6

THE TEN BIGGEST DECREASES*

Gifford-Hill	471	96.6%
Aluminum Co. of America	74	96.4
Firestone Tire & Rubber	96	95.6
Datapoint	447	95.1
Midland-Ross	334	94.9
Boise Cascade	137	94.0
Genesco	382	93.9
Cummins Engine	221	93.3
Bangor Punta	395	93.1
Sun Chemical	383	92.5

THE INDUSTRY MEDIANS

	INCREASES
Musical instruments, toys, sporting goods	291.6%
Pharmaceuticals	13.3
Apparel	12.5
Publishing, printing	10.4
Soaps, cosmetics	9.1
Office equipment (includes computers)	8.9
Beverages	8.5
Food	7.1
Textiles, vinyl flooring	4.9
Electronics, appliances	1.1
	DECREASES
Metal manufacturing	100.0%
Motor vehicles	55.4
Rubber, plastic products	50.4
Mining, crude-oil production	47.5
Glass; concrete, abrasives, gypsum	40.8
Paper, fiber, and wood products	39.1
Industrial and farm equipment	37.3
Aerospace	30.9
Chemicals	30.8
Shipbuilding, railroad and transportation equipment	20.3
Metal products	16.7
Petroleum refining	14.9
Measuring, scientific, photographic equipment	7.1
Leather	N.A.
Furniture	N.A.
Tobacco	N.A.
Jewelry, silverware	N.A.

*Listings exclude money losers.

SALES PER DOLLAR OF STOCKHOLDERS' EQUITY

THE TEN HIGHEST

	SALES RANK	
Wilson Foods	173	$26.79
Rath Packing	490	25.74
Swift Independent	157	25.65
Frederick & Herrud	407	21.22
American Motors	139	18.61
Monfort of Colorado	296	18.17
Revere Copper & Brass	422	17.76
American Bakeries	438	15.56
Land O'Lakes	100	15.44
Pacific Resources	258	14.29

THE FIVE LOWEST

Joseph E. Seagram & Sons	225	$.59
Newmont Mining	366	.54
AM International	397	−7.31
International Harvester	73	−21.80
Chrysler	29	−30.46

THE INDUSTRY MEDIANS

Food	$4.88
Aerospace	4.19
Musical instruments, toys, sporting goods	3.96
Shipbuilding, railroad and transportation equipment	3.79
Rubber, plastic products	3.54
Apparel	3.53
Petroleum refining	3.28
Motor vehicles	3.28
Metal products	3.08
Beverages	3.00
Soaps, cosmetics	2.88
Electronics, appliances	2.86
Textiles, vinyl flooring	2.85
Metal manufacturing	2.74
Glass, concrete, abrasives, gypsum	2.50
Industrial and farm equipment	2.43
Paper, fiber, and wood products	2.41
Chemicals	2.28
Publishing, printing	2.24
Measuring, scientific, photographic equipment	2.09
Office equipment (includes computers)	1.95
Pharmaceuticals	1.82
Mining, crude-oil production	1.67
Leather	N.A.
Furniture	N.A.
Tobacco	N.A.
Jewelry, silverware	N.A.
All Industries	2.74

ASSETS PER EMPLOYEE

THE TEN HIGHEST

	SALES RANK	
Louisiana Land & Exploration	265	$979,045
National Co-op Refinery Assoc.	331	769,763
Superior Oil	180	736,465
Pacific Resources	258	718,181
Amerada Hess	40	691,494
Shell Oil	13	585,580
Marion	477	564,457
Standard Oil of California	7	562,958
Coastal	54	556,151
Natomas	214	522,677

THE FIVE LOWEST

Interstate Bakeries	381	$15,599
Hanson Industries	306	15,347
Oxford Industries	488	15,059
EG&G	341	14,857
American Bakeries	438	13,901

THE INDUSTRY MEDIANS

Petroleum refining	$392,178
Mining, crude-oil production	334,749
Chemicals	106,699
Metal manufacturing	100,093
Paper, fiber, and wood products	96,643
Beverages	92,971
Pharmaceuticals	79,802
Publishing, printing	72,936
Glass, concrete, abrasives, gypsum	72,321
Soaps, cosmetics	71,238
Industrial and farm equipment	65,729
Motor vehicles	62,838
Office equipment (includes computers)	62,517
Food	59,077
Metal products	57,894
Aerospace	53,236
Rubber, plastic products	52,987
Measuring, scientific, photographic equipment	51,730
Electronics, appliances	48,753
Musical instruments, toys, sporting goods	46,697
Shipbuilding, railroad and transportation equipment	45,119
Textiles, vinyl flooring	33,897
Apparel	24,818
Leather	N.A.
Furniture	N.A.
Tobacco	N.A.
Jewelry, silverware	N.A.
All Industries	66,797

SALES PER EMPLOYEE

THE TEN HIGHEST

	SALES RANK	
Pacific Resources	258	$1,626,889
National Co-op Refinery Assoc.	331	1,586,819
Holly	432	1,369,614
Charter	88	1,127,216
Tosco	112	1,118,053
Crown Central Petroleum	197	1,048,798
Marion	477	1,029,961
Coastal	54	999,899
Amerada Hess	40	938,739
American Petrofina	171	886,342

THE FIVE LOWEST

Oxford Industries	488	$36,349
General Instrument	302	35,845
Kellwood	400	34,875
Hart Schaffner & Marx	329	34,529
National Semiconductor	279	28,852

THE INDUSTRY MEDIANS

Petroleum refining	$515,722
Mining, crude-oil production	195,915
Food	123,834
Beverages	120,016
Chemicals	114,823
Soaps, cosmetics	111,853
Metal manufacturing	101,773
Paper, fiber, and wood products	100,849
Rubber, plastic products	94,578
Glass, concrete, abrasives, gypsum	84,385
Motor vehicles	83,550
Metal products	83,413
Pharmaceuticals	83,394
Industrial and farm equipment	82,873
Publishing, printing	82,312
Shipbuilding, railroad and transportation equipment	78,220
Aerospace	76,824
Measuring, scientific, photographic equipment	68,996
Musical instruments, toys, sporting goods	68,660
Electronics, appliances	62,959
Office equipment (includes computers)	62,679
Textiles, vinyl flooring	53,665
Apparel	47,551
Leather	N.A.
Furniture	N.A.
Tobacco	N.A.
Jewelry, silverware	N.A.
All Industries	90,837

THE MONEY LOSERS

	SALES RANK	1982 LOSS
International Harvester	73	$1,638,193,000*
Bethlehem Steel	64	1,469,600,000
Ford Motor	5	657,800,000*
National Steel	127	462,773,000
AMAX	161	390,100,000
U.S. Steel	14	361,000,000
Armco	61	345,100,000
Republic Steel	145	239,219,000
Allis-Chalmers	217	206,981,000*
Eaton	147	189,630,000
Caterpillar Tractor	45	180,000,000
Colt Industries	205	161,358,000
Revere Copper & Brass	422	157,108,000
LTV	65	154,900,000
Clark Equipment	292	154,504,000
American Motors	139	153,474,000*
American Can	89	132,900,000
Inland Steel	143	118,795,000
Kaiser Aluminum & Chemical	138	115,000,000
Crown Zellerbach	133	112,200,000
Manville	187	97,584,000
NVF	338	92,463,000
Mead	149	85,784,000
AM International	397	83,034,000*
Black & Decker Mfg.	251	76,602,000
Harnischfeger	479	76,531,000
Phelps Dodge	301	74,296,000
Asarco	245	74,080,000
Wheeling-Pittsburgh Steel	354	58,769,000
Chromalloy American	263	42,380,000
Nashua	404	40,500,000
Celanese	126	34,000,000
B.F. Goodrich	128	32,800,000
Koppers	208	31,131,000
Fruehauf	189	30,391,000
Southwest Forest Industries	412	27,389,000
Zenith Radio	257	21,800,000
American Hoist & Derrick	467	21,793,000
A.O. Smith	371	16,761,000
Cyclops	321	11,921,000
National Semiconductor	279	10,694,000
American Bakeries	438	10,301,000*
Marion	477	10,157,000
Willamette Industries	310	9,093,000
Dan River	440	8,726,000
Mobay Chemical	273	8,359,000
Mohasco	424	7,612,000
CertainTeed	333	7,141,000*
Masonite	481	6,110,000
H.K. Porter	468	4,864,000
Dorsey	473	3,970,000
Crane	275	3,343,000
Timken	293	3,001,000
Bell & Howell	361	2,930,000
Singer	155	2,900,000
Barnes Group	484	2,743,000
Lever Brothers	244	1,948,00*
Louisiana-Pacific	322	1,800,000

*Also lost money in 1981.

ARRIVALS AND DEPARTURES

NEWCOMERS TO THE 500

	SALES RANK
Amdahl	469
Ametek	500
Apple Computer	411
Coleco Industries	444
Cooper Tire & Rubber	493
Datapoint	447
Diebold	496
Dr Pepper	441
Echlin	457
Flowers Industries	470
Hanson Industries	306
Holly	432
Liquid Air	476
Media General	495
Meredith	474
Mobay Chemical	273
MEI	448
North American Coal	461
Oxford Industries	488
Prime Computer	489
Robins (A.H.)	462
Snap-on Tools	492
Stone Container	498
Sun-Diamond Growers of California	443
Swift Independent	157
Tribune	237
Tyco Laboratories	426
Universal Foods	452
Wisconsin Dairies Cooperative	485
Worthington Industries	486

RETURNED TO THE 500*

Butler Manufacturing (1979: 473)	497
Easco (1971: 468)	499
Fleetwood Enterprises (1980: 485)	414
Fuqua Industries (1975: 322)	399
International Flavors & Fragrances (1980: 498)	478
Maytag (1972: 493)	482
Phillips-Van Heusen (1975: 481)	491
Roper (1979: 490)	494
Royal Crown Companies (1979: 489)	465
Sanders Associates (1970: 487)	487
Wilson Foods (1966: 81)	173

*Figures in parentheses indicate year and sales rank the last time the company was listed.

DISPLACED FROM THE 500

	1981 SALES RANK
Akzona[1]	279
Ampco-Pittsburgh	493
Arcata[2]	373
Avnet[3]	266
BATUS[3]	90
Bally Manufacturing[3]	339
Beckman Instruments[4]	423
Belco Petroleum	484
Brown Group[3]	263
Campbell Taggart[5]	270
Chicago Pneumatic Tool	482
Cities Service[6]	39
Commonwealth Oil Refining	314
Copperweld	424
Diamond International[7]	261
Dorchester Gas[3]	390
Envirotech[8]	485
Evans Products[3]	243
Farmland Industries[3]	64
Fiat-Allis	473
L.B. Foster	458
Gulf Resources & Chemical	459
Ideal Basic Industries	483
Macmillan	487
Mallinckrodt[9]	477
Marathon Oil[10]	36
McLouth Steel[11]	385
Midland Cooperatives[12]	467
Northwestern Steel & Wire	488
Peavey[13]	352
Purex Industries[2]	396
RCA[3]	44
Riegel Textile	499
Saxon Industries[14]	388
Jos. Schlitz Brewing[15]	335
Signode[2]	394
Sunbeam[16]	237
Thiokol[17]	383
Titanium Metals Corp. of America	469
Universal Leaf Tobacco[3]	306
Whittaker[3]	221

[1] Acquired by Akzo September 8, 1982. [2] Figures no longer made public. [3] No longer classified as an industrial. [4] Merged with SmithKline (1981 rank: 195) to form SmithKline Beckman (rank: 131) March 4, 1982. [5] Acquired by Anheuser-Busch (rank: 77) November 2, 1982. [6] Acquired by Occidental Petroleum (rank: 15) December 3, 1982. [7] Acquired by General Oriental of Hong Kong December 3, 1982. [8] Acquired by Baker International (rank: 156) March 2, 1982. [9] Acquired by Avon (rank: 129) March 8, 1982. [10] Acquired by U.S. Steel (rank: 14) March 11, 1982. [11] Acquired by Tang Industries November 15, 1982. [12] Merged with Land O'Lakes (rank: 100) January 1, 1982. [13] Acquired by No public figures. [15] Acquired by Stroh Brewery June 10, 1982. [16] Acquired by Allegheny International (rank: 142) January 2, 1982. [17] Merged with Morton Norwich (rank: 295) September 24, 1982, and did not publish figures for 1982.

ALPHABETICAL INDEX TO THE 500

COMPANY	RANK
A	
ACF Industries	344
AM International	397
AMAX	161
AMF	269
AMP	256
Abbott Laboratories	152
Agway	97
Air Products & Chemicals	223
Airco	271
Allegheny International	142
Allied	49
Allis-Chalmers	217
Alumax	294
Aluminum Company of America	74
Amdahl	469
Amerada Hess	40
American Bakeries	438
American Brands	90
American Can	89
American Cyanamid	113
American Greetings	401
American Hoechst	231
American Hoist & Derrick	467
American Home Products	76
American Motors	139
American Petrofina	171
American Standard	178
Ametek	500
Amstar	240
Amsted Industries	396
Anchor Hocking	314
Anderson Clayton	207
Anheuser-Busch	77
Apple Computer	411
Archer Daniels Midland	102
Armco	61
Armstrong Rubber	417
Armstrong World Industries	252
Arvin Industries	442
Asarco	245
Ashland Oil	36
Atlantic Richfield	12
Avery International	365
Avon Products	129
B	
BASF Wyandotte	304
Baker International	156
Ball	316
Bangor Punta	395
Barnes Group	484
Bausch & Lomb	446
Baxter Travenol Laboratories	209
Beatrice Foods	35
Becton Dickinson	277
Bell & Howell	361
Bemis	376
Bendix	86
Bethlehem Steel	64
Big Three Industries	348
Black & Decker Manufacturing	251
Blue Bell	248
Boeing	34
Boise Cascade	137
Borden	84
Borg-Warner	120
Briggs & Stratton	392
Bristol-Myers	104
Brockway	337
Brown-Forman Distillers	415
Brunswick	274
Bucyrus-Erie	375
Burlington Industries	140
Burroughs	85
Butler Manufacturing	497
C	
CBI Industries	260
CF Industries	311
CPC International	87
Cabot	220
Cameron Iron Works	270
Campbell Soup	135
Capital Cities Communications	384
Carnation	116
Carpenter Technology	458
Caterpillar Tractor	45
Ceco	472
Celanese	126
Central Soya	198
CertainTeed	333
Cessna Aircraft	332
Champion International	101
Champion Spark Plug	345
Charter	88
Chesebrough-Pond's	211
Chromalloy American	263
Chrysler	29
Cincinnati Milacron	352
Clark Equipment	292
Clorox	326
Cluett Peabody	325
Coastal	54
Coca-Cola	48
Coleco Industries	444
Colgate-Palmolive	70
Collins & Aikman	380
Colt Industries	205
Combustion Engineering	105
ConAgra	202
Cone Mills	398
Consolidated Foods	51
Consolidated Papers	437
Continental Group	67
Control Data	80
Cooper Industries	162
Cooper Tire & Rubber	493
Coors (Adolph)	312
Corning Glass Works	222
Crane	275
Crown Central Petroleum	197
Crown Cork & Seal	243
Crown Zellerbach	133
Cummins Engine	221
Cyclops	321
D	
Dan River	440
Dana	160
Dart & Kraft	30
Data General	339
Datapoint	447
Dayco	368
Dean Foods	357
Deere	75
Deluxe Check Printers	427
Dennison Manufacturing	416
Dexter	439
Diamond Shamrock	121
Diebold	496
Digital Equipment	95
Donnelley (R.R.) & Sons	241
Dorsey	473
Dover	290
Dow Chemical	27
Dow Corning	386
Dow Jones	360
Dr Pepper	441
Dresser Industries	83
Du Pont (E.I.) de Nemours	8
E	
EG&G	341
E-Systems	355
Eagle-Picher Industries	436
Easco	499
Eastman Kodak	26
Eaton	147
Echlin	457
Economics Laboratory	379
Emerson Electric	110
Emhart	201
Engelhard	182
Esmark	117
Ethyl	216
Ex-Cell-O	291
Exxon	1
F	
FMC	111
Fairchild	281
Farmers' Union Central Exchange	234
Federal Co.	266
Federal-Mogul	358
Federal Paper Board	445
Ferro	405
Fieldcrest Mills	455
Figgie International	367
Firestone Tire & Rubber	96
Fleetwood Enterprises	414
Flowers Industries	470
Ford Motor	5
Fort Howard Paper	433
Foster Wheeler	215
Foxboro	402
Frederick & Herrud	407
Freeport-McMoRan	356
Fruehauf	189
Fuqua Industries	399
G	
GAF	394
GATX	286
Gannett	229
Gates Learjet	428
General Cinema	317
General Dynamics	46
General Electric	11
General Foods	39
General Instrument	302
General Mills	63
General Motors	2
General Signal	212
General Tire & Rubber	179
Genesco	382
Georgia Kraft	454
Georgia-Pacific Corp	62
Geosource	343
Gerber Prdocuts	369
Getty Oil	24
Gifford-Hill	471
Gillette	172
Gold Kist	230
Goodrich (B.F.)	128
Goodyear Tire & Rubber	37
Gould	181
Grace (W.R.)	50
Great Northern Nekoosa	238
Greyhound	78
Grumman	177
Gulf Oil	9
Gulf & Western Industries	60
H	
Hammermill Paper	242
Handy & Harman	450
Hanson Industries	306
Harcourt Brace Jovanovich	418
Harnischfeger	479
Harris	199
Harsco	297
Hart Schaffner & Marx	329
Heileman (G.) Brewing	323
Heinz (H.J.)	103
Hercules	159
Hershey Foods	224
Heublein	204
Hewlett-Packard	81
Holly	432
Honeywell	59
Hoover	387
Hoover Universal	409
Hormel (Geo. A.)	239
Household Manufacturing	353
Hughes Tool	218
Hyster	410
I	
IC Industries	94
INTERCO	148
Idle Wild Foods	421
Illinois Tool Works	480
Ingersoll-Rand	144
Inland Steel	143
Insilco	378
Intel	315
Interlake	349
International Business Machines	6
International Flavors & Fragrances	478
International Harvester	73
International Minerals & Chemical	200
International Multifoods	268
International Paper	91
International Telephone & Telegraph	16
Interstate Bakeries	381
J	
James River Corp. of Virginia	347
Johnson Controls	255
Johnson & Johnson	55
Joy Manufacturing	282

K	
Kaiser Aluminum & Chemical	138
Kaiser Steel	359
Kane-Miller	351
Kellogg	164
Kellwood	400
Kerr Glass Manufacturing	451
Kerr-McGee	99
Kidde	150
Kimberly-Clark	134
Knight-Ridder Newspapers	246
Knudson	466
Koppers	208
L	
LTV	65
Land O'Lakes	100
Lear Siegler	233
Lever Brothers	244
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SALES

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ASSETS

Assets are those shown at the company's year-end.

NET INCOME

Net income is shown after taxes and after extraordinary credits or charges when any are shown on the income statement. A double asterisk (**) signifies an extraordinary credit reflecting at least 10% of the net income shown, a double dagger (‡) an extraordinary charge of at least 10%. Figures in parentheses indicate a loss.

STOCKHOLDERS' EQUITY

Stockholders' equity is the sum of capital stock, surplus, and retained earnings at the company's year-end. Redeemable preferred stock is excluded when its redemption is either mandatory or outside the control of the company, except in the case of cooperatives.

EMPLOYEES

The figure shown is a year-end total except when it is followed by a dagger (†), in which case it is an average for the year.

EARNINGS PER SHARE

For all companies the figures shown are the "primary" earnings per share that appear on the company's income statement. These figures are based on a weighted average of the number of common shares and common stock equivalents outstanding during the year. "Common stock equivalents" generally include (a) convertible securities whose cash yield is less than two-thirds of the prime rate at the time the securities were issued and (b) options and warrants when the effect of their inclusion in the computation would reduce the "primary" earnings per share. Per-share earnings for 1981 and 1982 are adjusted for stock splits and stock dividends. They are not restated for mergers, acquisitions, or accounting changes made after 1972. A double asterisk (**) signifies an extraordinary credit reflecting at least 10% of the net income shown, a double dagger (‡) an extraordinary charge of at least 10%. Results are listed as not available (N.A.) where the companies are cooperatives, joint ventures, or wholly owned subsidiaries of other companies, or if the figures were not published in 1972. The growth rate is the average annual growth, compounded. No growth rate is given if the company had a loss in either 1972 or 1982.

TOTAL RETURN TO INVESTORS

Total return to investors includes both price appreciation and dividend yield to an investor in the company's stock. The figures shown assume sales at the end of 1982 of stock owned at the end of 1972 or 1981. It has been assumed that any proceeds from cash dividends, the sale of rights and warrant offerings, and stock received in spin-offs were reinvested at the end of the year in which they were received. Returns are adjusted for stock splits, stock dividends, recapitalizations, and corporate reorganizations as they occur; however, no effort has been made to reflect the cost of brokerage commissions or of taxes. Results are listed as not available (N.A.) where shares are not publicly traded or traded on only a limited basis. Where companies have more than one class of shares outstanding, only the more widely held and actively traded has been considered.

Total return percentages shown are the returns received by the hypothetical investor described above. The ten-year figures are annual averages, compounded. Where corporations were substantially reorganized—e.g., because of mergers—the predecessor companies used in calculating total return are the same as those cited in the footnotes to the earnings-per-share figures.

INDUSTRY CODE

Industry code numbers used in the directory indicate which industry represents the greatest volume of industrial sales for each company. The numbers refer to the industry groups below, which are based on categories established by the U.S. Office of Management and Budget and issued by the Federal Statistical Policy and Standards Office. They are the same industry groups as those shown in the tables beginning on page 248. The median figures in the tables refer only to results of companies among the 500; no attempt has been made to calculate medians in groups with fewer than four companies.

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Most of the figures in this FORTUNE *500 Directory were prepared by reporter Alison Bruce Rea, who is responsible for the columns reporting on companies' sales, assets, net income, stockholders' equity, and the industry code numbers. Figures on earnings per share and total return to investors were prepared by Claudine Knight.*

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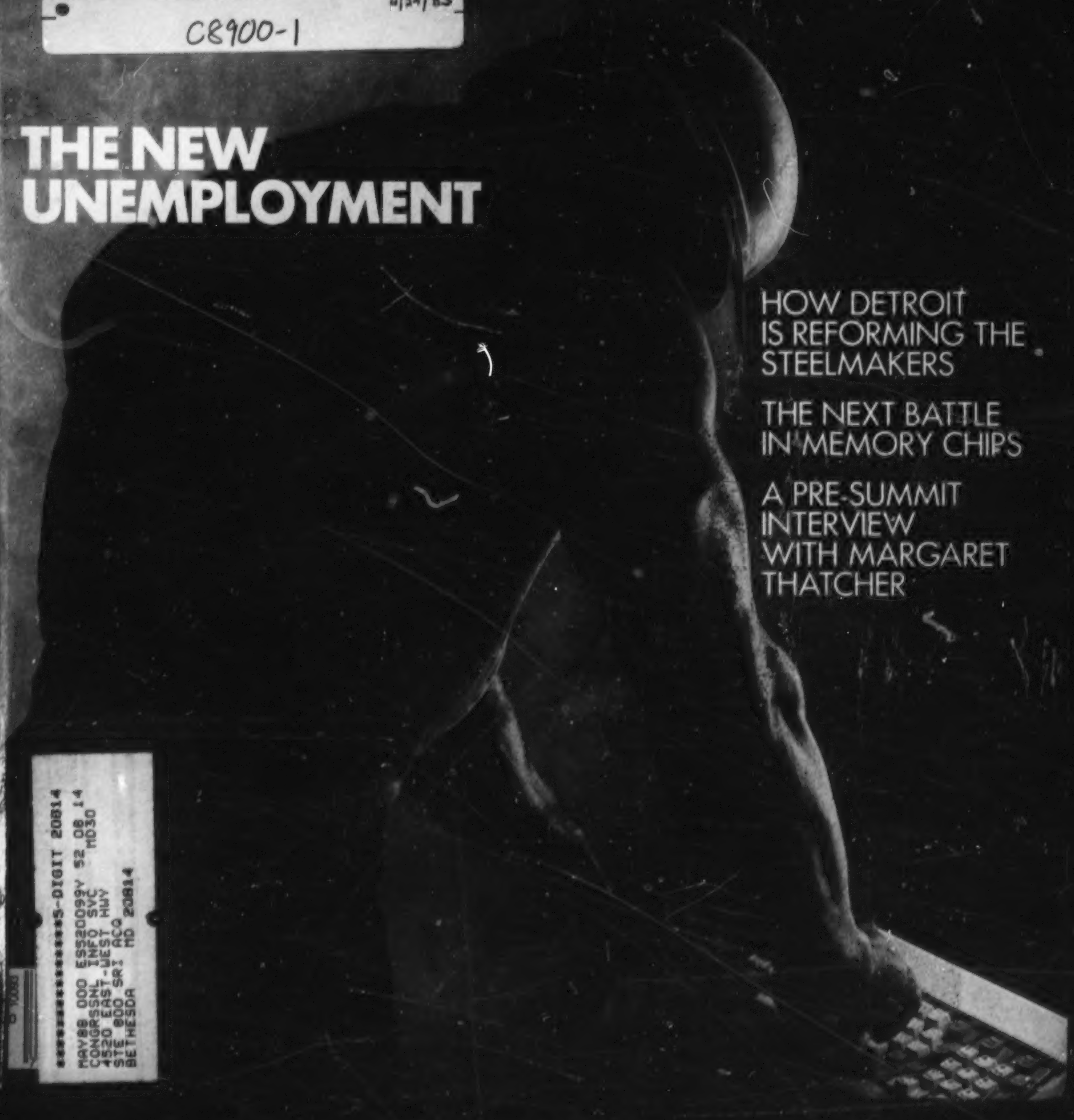

THE NEW UNEMPLOYMENT

HOW DETROIT IS REFORMING THE STEELMAKERS

THE NEXT BATTLE IN MEMORY CHIPS

A PRE-SUMMIT INTERVIEW WITH MARGARET THATCHER

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May 16, 1983

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THE NEW UNEMPLOYMENT

Neil Selkirk's cover photograph suggests the plight of workers whose traditional skills may not fit them for the jobs of today or tomorrow. For a dissection of the problem, and what should and should not be done about it, see page 106.

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SEMICONDUCTORS/GENE BYLINSKY

THE NEXT BATTLE IN MEMORY CHIPS

■ The surprising success of Japanese chipmakers in the market for advanced computer memories has done wonders to energize American producers. The next technological jump in memory chips is now imminent, and this time things look good for the Americans. "This," says an American chipmaking executive, "is going to be a different battle—one we may be able to win."

The competition centers on the so-called dynamic RAMs (random-access memories), which can store thousands of bits of data on a single chip. Dynamic RAMs, or d-RAMs, have emerged as the fastest-growing products in the world's fastest-growing industry. The current champ, the 64K (K meaning, roughly, a thousand storage cells), is the industry's largest-selling component ever—only three years after its debut. Sales are expected to top $900 million this year and peak at $1.6 billion in 1985. The Japanese have about 70% of the 64K market.

Now comes the 256K. Marketing in volume will begin at the end of this year. Because of its faster speed and greater storage capacity, it is expected to be an even bigger seller. Worldwide sales could reach $3.5 billion to $4 billion in four years—a chip with bigger sales than the whole U.S. machine tool industry achieved last year.

Demand for semiconductor memory seems immune to economic downturns. Analyst Michael J. Stark of Robertson Colman & Stephens in San Francisco points out that despite the worldwide recession, which held growth in the whole semiconductor market to a mere 2% in dollars in 1982, the memory market was up 23%. Assuming strong economic recovery, Stark adds, the memory market could leap by 40% next year, perhaps even 80%.

Of the two principal kinds of semiconductor memory, "volatile" and "nonvolatile," d-RAMs fall into the volatile category. Volatile memory loses its data unless constantly refreshed; the word "dynamic" indicates the need to constantly recharge the memory with tiny electric pulses to keep the stored data from vanishing. "Random access" refers to the ability to reach each memory cell at will—a d-RAM chip can be visualized as an incredibly miniaturized telephone network.

Ideally, every user would prefer nonvolatile memory, but it costs considerably more and in most versions does not permit immediate revision of data. Today it is used most extensively in electronic games and consumer products, where there is no need to alter the inscribed data. Even though dynamic RAMs suffer from amnesia if power fails, they are the most widely used of all memories. Besides being relatively cheap, they offer the advantage that data can be entered and immediately erased, to be replaced by new information. In general, makers of devices containing memory chips prefer those with the highest storage density, lowest power consumption, and fastest speed—selling, preferably, at a bargain. D-RAMs meet these wants better than other types. They are small in size and low in price (the 64K now sells for about $3.50 a chip), and their storage capacity is continually increasing.

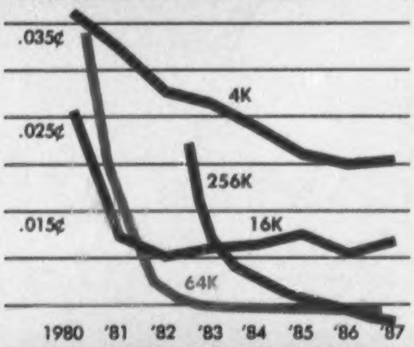
It was only 13 years ago that Intel Corp. brought out its 1K d-RAM chip, which became the industry standard. That chip had 1,024 cells. Since then storage density has increased in a fourfold jump every three years or so. The quadruplings are demanded partly by the need for standardization and partly by economics. The industry has made twofold increases standard, but the high cost of retooling to make a new chip rules out anything less than a fourfold jump.

In everyday usage, 256K is taken to mean 256,000 memory cells in each tiny chip, but that's not quite right. Actually, there are 262,144 cells—256 times the 1,024 of the original 1K. Each cell of a 256K consists of a storage transistor, or capacitator, which holds the tiny electrical charge, and a switch transistor that lets the charge in and out. In all, a 256K contains some 600,000 active devices in a sliver of silicon the size of a baby's fingernail. (To some Silicon Valley visionaries that's only a beginning: one is working to boost chip storage density to *millions* of bits. See page 155.)

This silicon rectangle, called a die, is packaged in a ceramic or plastic frame with 16 metal prongs as electrical connectors, be-

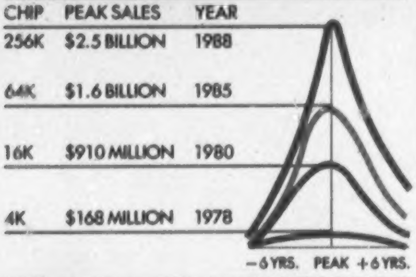
RESEARCH ASSOCIATE *Alicia Hills Moore*

The cheaper they get ...



A section of a 256K memory chip

... the more they sell



CHIP	PEAK SALES	YEAR
256K	$2.5 BILLION	1988
64K	$1.6 BILLION	1985
16K	$910 MILLION	1980
4K	$168 MILLION	1978

Tobogganing down *the learning curve is a way of life in the semiconductor memory business. In price per bit, the 256K should catch up with the 64K in 1985. (Estimates for upper chart from Gnostic Concepts Inc.) As prices fall, volumes keep climbing. (Lower-chart data from Motorola Inc.) The chip in the photograph is Western Electric's.*

coming a buglike chip. Remarkably, the size of these packages has remained much the same ever since the advent of the 1K d-RAM. The dies get only slightly larger as a new-generation RAM is introduced, and later, as manufacturers work their shrinking magic, the dies get smaller.

The chipmakers' success in jamming ever more memory cells into a chip has been paying off for users as well as greatly broadening memory applications. Together, 64K RAMs and single-chip microprocessors—which handle the logic, or arithmetic, function in computing—have helped create the personal computer industry. Personal computers, terminals, and other smallish electronic machines now absorb as much of the memory available on the merchant, or open, market as mainframes do. (Sales figures for the merchant market do not include the huge quantities of chips produced for their own use by IBM and Western Electric.)

The 256K will greatly enhance memory capabilities. A single 256K chip could store 10,000 telephone numbers or 5,200 words of text, compared with a 64K's 1,300 words. This greatly bolstered capacity will make many electronic machines four times smarter. And that will be achieved in many cases simply through removing the 64Ks now in use and plugging 256Ks into the sockets—a market already in place.

Grand-scale conversion to the 256K will start when the price drops to about five times that of the 64K (see chart). Today 256Ks are already being offered for volume delivery at about $40 per chip. A fivefold price differential will be sufficient because users will save on board space, auxiliary chips, and power.

Increased memory capacity is important by itself. It will do wonders for computer graphics, for instance, making possible a fourfold increase in the sharpness of pictures on the screens. But there is much more to the 256K. It promises faster access to the stored data—below 100 nanoseconds (billionths of a second), compared with the 150 to 250 nanoseconds required by most 64Ks. It also offers such unique features not yet available on the 64Ks as the "nibble" and "ripple" modes—ways of retrieving data in bigger dips than one bit at a time. With 256Ks, manufacturers will be able to build cheaper, more reliable, and more powerful computers, calculators, and numerous other electronic devices.

The d-RAM used to be an important contributor to the profits of U.S. semiconductor companies—until the Japanese came in. "The Japanese have clearly destroyed the profitability of the dynamic RAMs," says Intel Chairman Gordon E. Moore. The Semiconductor Industry Association recently estimated that five U.S. companies lost $143 million on 16Ks and 64Ks in 1981 and 1982. Advanced Micro Devices, with a 17% growth rate last year, has been the industry's best performer during the current recession, and even so, Jerry Sanders, the company's outspoken chairman, finds the Japanese competition in d-RAMs painful. "We do well in other components," he says, "but in d-RAMs we lose our shirt, shoes, and ass." The Semiconductor Industry Association has suggested in the past that the Japanese were losing money on d-RAMs to gain market share. The Japanese say it isn't so.

U.S. producers have stuck to the d-RAM business because they feel that more is at stake than profits. Many share Sanders's view that Japan is engaged in a "war of attrition" against the American semiconductor industry. Drawing a parallel, Sanders says: "First you give up Czechoslovakia, then Poland. What's next? France and England? You can't walk away successively from important parts of the business."

Now the 256K looms as a potential winner for U.S. companies. "Clearly," says Intel's Moore, "I don't expect to be losing money in d-RAMs forever." Getting the 256K out the door has become the highest priority at many U.S. companies. Some are in pilot production six months to a year ahead of industry observers' expectations.

THE COMING STRUGGLE for the 256K market is shaping up as the biggest test the Japanese have faced so far in their drive to gain primacy in the world semiconductor industry, and some Americans question whether the Japanese can repeat their 64K success in the 256K competition. It was one thing for the Japanese to achieve what Jack C. Carsten, a senior vice president at Intel, calls "a photographic rip-off of Mostek's 16K." The Japanese produced a workable 64K by quadrupling the layout of Mostek Corp.'s standard-setting device. Looking ahead to the 256K even then, Mostek and most other American memory producers decided that more complex technologies were needed to manufacture the 64K and got slowed down for a while.

It's quite another thing for the Japanese to master the innovative designs and processes needed to produce the 256K. What the Japanese are being forced to do this time around is what most American manufacturers chose to do with the 64K: push both product design and process innovation to the limit simultaneously. That risk-taking delayed most American chips by as much as two years and largely gave the 64K market over to the Jap-

A CHEAP-MEMORY CHASER PURSUES THE 4,000K CHIP

■ Chipmakers will start running out of room before long as they try to jam more and more transistors into a little rectangle of silicon. In Silicon Valley and elsewhere, a good many researchers are working on this overcrowding problem. Most of them are sticking with conventional design and aiming to reduce the already minuscule dimensions of the devices inscribed on the chips. One research team, though, is pursuing another course, involving a radically different chip design. If successful, this approach could revolutionize memory technology and related computer architecture.

The leader of this effort is Alton O. Christensen of Condesin Inc., a small, privately owned outfit in Fremont, California. At 61, he is one of Silicon Valley's oldest innovators. Christensen, whom almost everybody calls Chris, can look back on impressive achievements in semiconductor memory development. "I've been chasing cheap memories all my life," he says. While working for Shell Oil Co. in 1967, he devised the first manufacturable 1K dynamic RAM chip. Today semiconductor manufacturers pay Shell royalties on Christensen's patents; he estimates that Shell has collected more than $30 million. Royalties on another Christensen innovation, a very fast memory chip, go to Standard Microsystems Corp. of Hauppauge, New York, a company he founded.

MICHAEL ALEXANDER

Alton O. Christensen *guides a silicon wafer with thousands of "microguns" into an electron microscope for testing.*

Christensen is noted for being able to inspire co-workers. Big R&D teams, he feels, build a "box" around their problems. "My form of indoctrination," he says, "is to teach everybody to look for alternatives."

The alternative he is currently developing escapes the box of convention. His new chips contain no individual transistors or data-storage cells. Instead, one of the material layers in the chip serves as a depository of tiny charges put there from above by microscopic electron guns firing beams of electrons. As Christensen puts it, a beam drives a "nail" into the target. "Then the nail is removed except for its tip and the structure relaxes back to where it was before." The nail tips become data bits that can be detected by the electron beams.

Since no transistors or cells are needed to store the charges, the capacity of a Christensen memory chip is limited only by the smallest number of electrons that can be detected in a stored charge. Christensen's initial devices, now under development, will be designed to store 4,194,304 bits of data—16 times as many as the 256K (see story). So densely packed with data will these memories be that if an object the size of a beach ball were covered with them, it could hold all the information in the Library of Congress.

Christensen envisions future chips, based on the same concept, with the potential of storing 400 megabits—400 million bits. Even four megabits, however, is beyond what any other outfit is even talking about achieving. Several semiconductor companies are developing a conventional one-megabit d-RAM, but it won't come into use for another three or four years.

The design Christensen is working on has other advantages besides huge storage capacity. Unlike d-RAMs, the devices won't lose their data when the electricity goes off. They will provide fast access to data—500,000 times faster than disk memories, Christensen says. With all this, Christensen's new chips could eventually replace not only d-RAMs but also disk memories and could greatly improve the functioning of a variety of electronic devices.

Christensen did not invent the basic idea. The notion of storing charges by means of electron beams—emitted by a big vacuum tube serving as an electron gun—grew out of research at MIT's Lincoln Lab in the late 1960s. Some Lincoln scientists formed a company, Microbit, to develop a memory device based on the vaccum-tube technology, but that came to naught. General Electric also worked along similar lines without results.

Christensen carefully studied these failures and decided that the only way to make such a memory economical would be to use semiconductor technology. After two years he succeeded in microminiaturizing the electron guns. Now hundreds of microguns can be embedded in a silicon chip.

Condesin has successfully tested the microguns—tiny inverted pyramids etched in silicon—and demonstration of the complete device may come this year. The company expects volume production of the four-million-bit RAM to start toward the end of next year—just as the 256K is coming into its own.

Condesin (for Consulting, Design, Innovation) was organized in 1978 by Chris's wife, Lois Stone, a statistician who once ran reliability programs at NASA. She is the C.E.O., Chris vice president and technical director. The principal outside backer so far has been Technical Development Capital Ltd., a venture fund owned by British banks.

By Christensen's count, development of the new memory device still has to pass no fewer than 11 technical milestones. But Christensen is calmness and quiet confidence personified, possibly because he is not only an electrical engineer but also a former Lutheran minister. He writes fables for his grandchildren, often dealing with innovators. ("When the world was flat and became flooded, the man who invented the hole and the shovel became a hero.")

He is not ruffled by the question sometimes raised by semiconductor industry executives: Who is Alton O. Christensen? "They know my name in their patent departments," he chuckles. Neither is he concerned by occasional comments that his technology will never work. Even some semiconductor companies that aren't convinced it will work are beginning to take note. As a memory expert from one company said after looking over what Christensen is up to: "If this technology has a snowball's chance in hell, we've got to have it."

anese during that period. (See "Japan's Ominous Chip Victory," FORTUNE, December 14, 1981.) While most U.S. manufacturers struggled to develop and refine their technological innovations, the Japanese moved in smoothly with their less sophisticated but working 64Ks. Now, however, the competitive situation favors the American producers because their 64K technology is more directly applicable to the 256K.

Intel, for one, expects to be a winner in the coming competitive battle. Says Ronald J. Whittier, vice president and general manager of Intel's memory products division: "This time we have a chance of being among the top three producers, instead of being down in the mud." Intel has moved to a new chipmaking technology and believes it will produce chips that are smaller, faster, and more reliable, and use less power besides. "We have a minimum one year's lead," says Whittier. "I love a year's lead."

Texas Instruments, too, sounds confident these days. Says Walden C. Rhines, senior vice president of the semiconductor group: "Production ramp-up will occur much faster on the 256K than on the 64K. We're more experienced and better prepared. The parts we'll provide to users as samples will be production parts."

MOTOROLA, a seasoned high-volume producer of 64Ks, is also optimistic about the success of its 256K. So is Mostek, which in a prelude to its full-scale introduction of the 256K, plans to turn out 25 million to 30 million 64Ks this year. That would place it among the top producers, continuing the American comeback on the 64K front. (See "U.S. Chipmakers Are Back in the Race," FORTUNE, June 28, 1982.) At least four other U.S. companies are working on 256Ks: Fairchild, National Semiconductor, AMD, and Micron Technology of Boise, Idaho, a newcomer financed mainly by Idaho potato farmers bent on making money in non-edible chips—now there's a technology leap.

The most unpleasant development for the Japanese may be Western Electric's entry into the merchant market with an excellent 256K chip. AT&T's manufacturing affiliate has long made its own d-RAMs but has never sold them on the outside. Western Electric's size—$12.6 billion in sales last year—puts an American giant into the tussle. Industry observers, furthermore, place Western's 256K far ahead of Japanese devices in manufacturability, so much so that they expect Western to jolt the Japanese by turning out millions of 256Ks a month by the end of this year. The closest Japanese competitor, Fujitsu, expects to be making only one-tenth that number by then.

The most unpleasant development for the Japanese may be Western Electric's entry into the market. The size of AT&T's manufacturing affiliate—$12.6 billion in sales last year—puts an American giant into the tussle.

U.S. manufacturers hold other advantages this time. For example, many of them have become well versed in the use of what is called "redundancy." Redundancy employs extra on-chip cells that allow the rerouting of electricity around defective cells after a chip is manufactured. This greatly increases the yield of usable chips from a given quantity of silicon wafers. Mastery of this technique in producing 64Ks gives U.S. manufacturers an edge over the Japanese because production of the 256K requires redundancy. The Japanese did not use redundancy in their 64Ks and now have to master this aspect of chip technology. American companies also have an advantage from their earlier use of "steppers," sophisticated lithographic devices that allow finer control in chipmaking. In the production of 64Ks, use of this advanced equipment looked a bit premature to the Japanese, and none of them adopted it.

As for quality, that is no longer the issue it once was. U.S. suppliers now rank on top with users as often as the Japanese do. Daniel L. Klesken, semiconductor industry analyst with Montgomery Securities in San Francisco, sees still another plus for U.S. producers of the 256K: "I find American users having second thoughts about going with the Japanese 100% in d-RAMs—especially when Japanese suppliers start coming after these users as competitors in the systems they build." Adds Robert B. Palmer, senior vice president in charge of semiconductor operations at Mostek: "This time the users won't have to wait for American chips."

In this round the Japanese have no choice but to go to greater complexity—that's the nature of the 256K. Quadrupling a 64K design won't do. The 256K demands new kinds of interconnections for faster signal speed to span its lengthened rows and columns of cells. That speed has to be attained by the use of new cell layouts and new process techniques. "In this generational transition," says TI memory designer G.R. Mohan Rao, "a brute-force approach will not work."

Some Japanese companies, notably Nippon Electric Co., are gambling on making their 256Ks with novel process technologies. To make a denser and smaller chip, NEC is going with a manufacturing process known as two-layer metallization, new to this type of memory. Intel's Carsten points to the complexities involved in the NEC approach. "Building semiconductors that way," he says, "is like building a house of cards. You start at the bottom with a perfectly polished wafer. Then you begin depositing layers of polysilicon and other substances on the wafer. You deposit, and then you etch. Deposit and etch." So the surface gets more and more irregular.

"Through a microscope the structure looks like the Grand Canyon, and the problem with putting on additional layers is that as the surface gets rougher and rougher, the ability to make good and reliable electrical contact gets tougher and tougher. Then you end up trying to deposit aluminum on top of that surface. It's sort of like spraying paint at a target four or five feet away. If the surface is a smooth plane, it's relatively easy to spray the metal. If it's very rough, if you don't get any paint on the edges, for instance, you won't be able to conduct any current, and the damn thing won't be reliable."

CARSTEN CONCEDES that if NEC can make the layering technology work, it may turn out to be "terrific," as he puts it. "If they can't, they have to go back to square one and start over again, as a number of us did on the 64K. I'd guess that it's going to be a near-term bust and a long-term boom when they finally get it sorted out. That's sort of what happened to us in the 64K."

Underestimating the Japanese is dangerous, of course. The Japanese record in semiconductor innovation is almost nonexistent and they still lag in design capabilities, but they have built formidable d-RAM production equipment. With extensive production facilities in place, and their home economy somewhat stagnant, the Japanese will get exceedingly aggressive in their export drive. For the time being, though, the Americans have an edge.

■ A powerful American comeback in advanced computer memories, capturing a dominant share of the potentially huge market for 256Ks, would do more than restore the pride of U.S. chip designers. All along, U.S. producers have been putting on a pretty good performance in memory technology. With success in the coming 256K battle, the chipmakers may start doing better at something they haven't done at all well at in recent years—making money. ■

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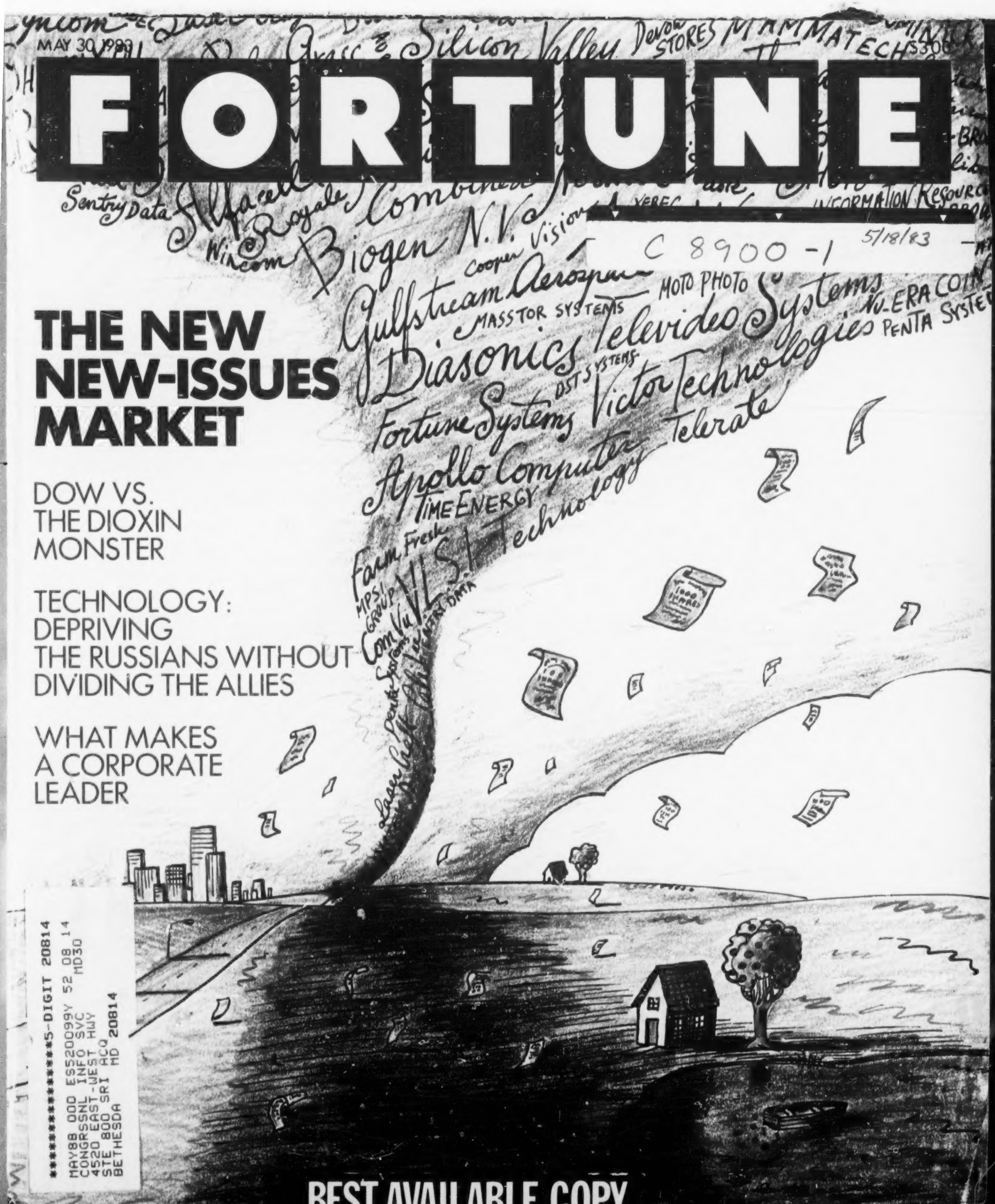
THE NEW NEW-ISSUES MARKET

DOW VS. THE DIOXIN MONSTER

TECHNOLOGY: DEPRIVING THE RUSSIANS WITHOUT DIVIDING THE ALLIES

WHAT MAKES A CORPORATE LEADER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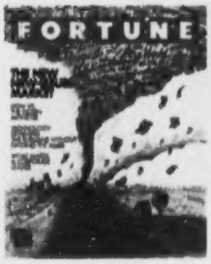

The pencil-and-ink cover drawing by Jean-Claude Suarès depicts the tornado of initial stock offerings hitting the financial markets. For what's new and different about this new-issues boom, see page 50.

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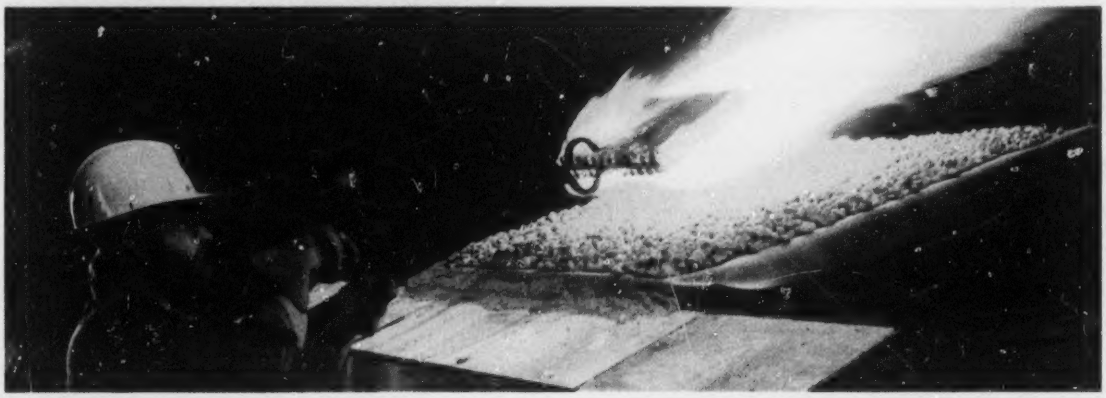

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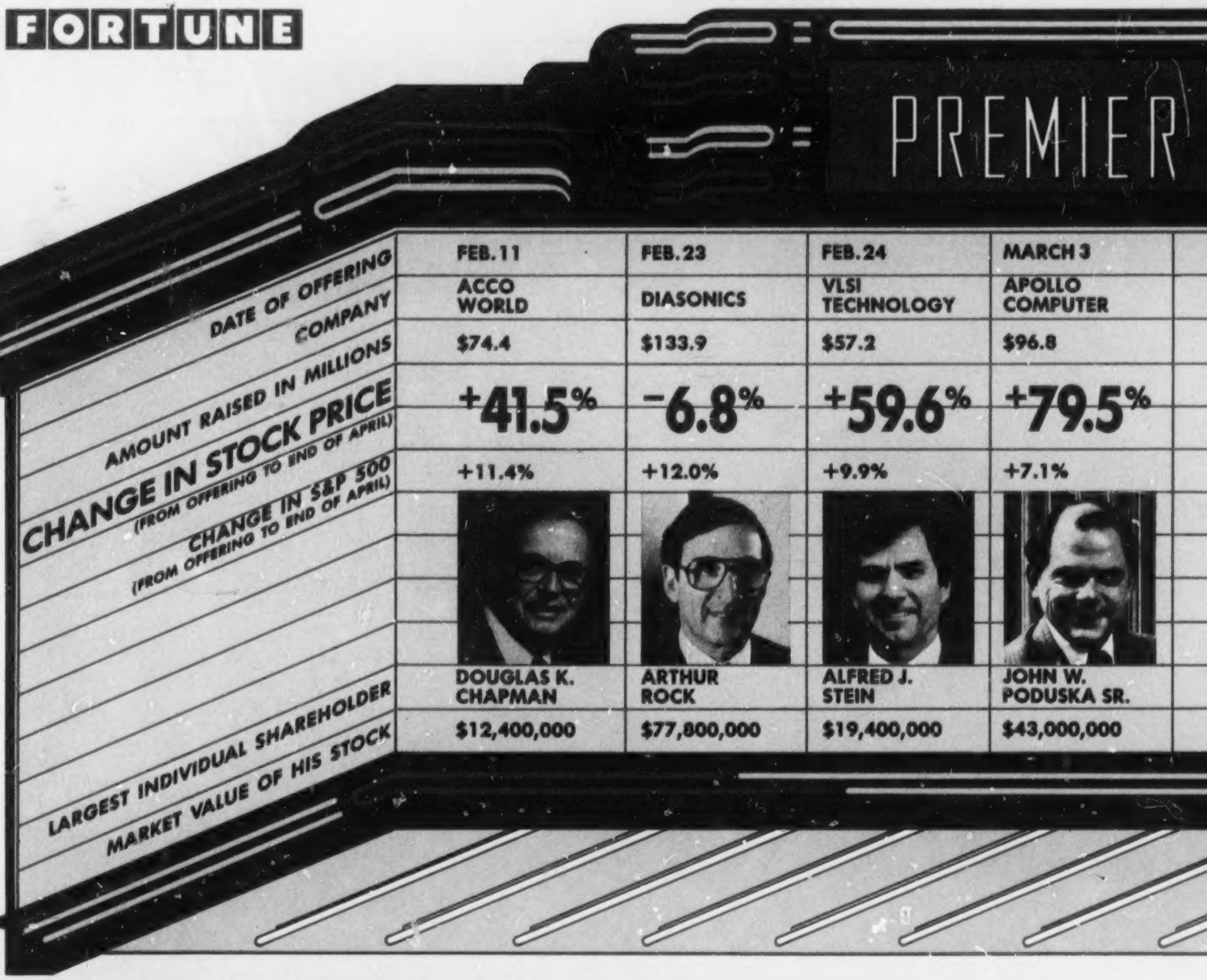


DATE OF OFFERING	FEB. 11	FEB. 23	FEB. 24	MARCH 3
COMPANY	ACCO WORLD	DIASONICS	VLSI TECHNOLOGY	APOLLO COMPUTER
AMOUNT RAISED IN MILLIONS	$74.4	$133.9	$57.2	$96.8
CHANGE IN STOCK PRICE (FROM OFFERING TO END OF APRIL)	+41.5%	−6.8%	+59.6%	+79.5%
CHANGE IN S&P 500 (FROM OFFERING TO END OF APRIL)	+11.4%	+12.0%	+9.9%	+7.1%
LARGEST INDIVIDUAL SHAREHOLDER	DOUGLAS K. CHAPMAN	ARTHUR ROCK	ALFRED J. STEIN	JOHN W. PODUSKA SR.
MARKET VALUE OF HIS STOCK	$12,400,000	$77,800,000	$19,400,000	$43,000,000

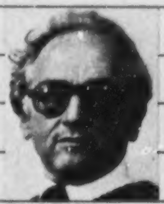
NEW ISSUES/IRWIN ROSS

WHAT'S NEW ABOUT THIS BOOM

■ All bull markets give private companies the urge and incentive to go public, and this market is no different. What's different is the companies themselves—bigger and older than those behind the "hot issues" eruptions of the 1960s—as well as their owners, more financially astute. The buyers too are a different breed.

ILLUSTRATIONS BY ROGER GORMAN

PUBLIC OFFERINGS

MARCH 4	MARCH 15	MARCH 22	MARCH 23	MARCH 25	APRIL 8	APRIL 27
FORTUNE SYSTEMS	TELEVIDEO SYSTEMS	BIOGEN N.V.	VICTOR TECHNOLOGIES	MASSTOR SYSTEMS	GULFSTREAM AEROSPACE	TELERATE
$110.0	$123.8	$57.5	$78.8	$52.8	$167.2	$88.0
−14.8%	+54.2%	−20.7%	+20.0%	+34.4%	0%	−1.3%
+7.0%	+8.6%	+9.1%	+7.6%	+7.7%	+7.6%	+1.8%
						
GARY B. FRIEDMAN	K. PHILIP HWANG	WALTER GILBERT	CHARLES I. PEDDLE	ERIK O.J. SALBU	ALLEN E. PAULSON	NEIL S. HIRSCH
$26,200,000	$794,600,000	$8,400,000	$27,700,000	$10,900,000	$545,900,000	$66,700,000

The new stocks of 1983 *include these 11 nonfinancial corporations that made initial public offerings larger than $50 million. (Offerings of divisions of public companies were excluded.) Seven companies sell computer hardware or software. Of the others, Acco produces office supplies, Diasonics makes diagnostic equipment, Biogen is in genetic engineering, and Gulfstream makes corporate jets. The largest shareholder's stock is valued as of the end of April, but the figure shown also includes proceeds from any stock he sold in the offering.*

All of this is a mixed blessing for investors. New stocks underwritten by prominent firms seldom double in the first day or two of trading as new issues frequently did in the two binges of the early and late Sixties. Entrepreneurs and their backers are negotiating to keep more of the value for themselves. And investment bankers, who have learned to live with cut-rate commissions on practically every other kind of stock sale, are still making their accustomed rich fees from initial public offerings.

Nonetheless, the new merchandise is selling like mad. In the first quarter investors lavished $1.62 billion on the initial offerings of 107 corporations registered with the Securities and Exchange Commission—more than they spent for such issues in all of 1982. If that outpouring of money keeps up at the same rate for the whole year, the volume of initial offerings will surpass that of every other year since World War II, including the peak year of 1969, even when measured in constant dollars. The size of recent issues has also been stunning, with six (including two savings and loans) so far this year topping $100 million, compared with one in 1982, two in 1981, and perhaps no more than a half dozen others in all of American corporate history.

THE MARQUEE ABOVE highlights the largest nonfinancial public offerings of 1983 and suggests what going public has meant to the companies' chief stockholders as well as to investors who bought the stocks at the offering price. Two of the new companies—Gulfstream Aerospace and Telerate—are examined in articles on pages 58 and 65. The Gulfstream issue, probably second in size only to Ford Motor Co.'s $658-million offering in 1956, made Chairman Allen Paulson's stock worth $546 million overnight. And Telerate's securities quotation service so intrigued investors that the company was valued at almost $900 million despite its modest $41.6 million in annual revenues.

Those two stocks haven't done much for their new shareholders yet, and some buyers of other large issues (Fortune Systems, Biogen, and Diasonics) have lost money. But most of the big issues have so far proved good bets. Apollo Computer, a Chelmsford, Massachusetts, company that makes computer work stations for scientists and technicians, was issued at $22 a share on March 3. The first trade was at $25.50, and the stock closed the day at $26.50, providing the "flippers"—as the quick traders are called—with a 20% profit on the offering price. In early

May, Apollo was selling at $38.75—which represented a profit of 46% even for those who bought at the end of the first day. Televideo Systems of Sunnyvale, California, another computer stock on the marquee, went public on March 15 at $18 and rose 20% during the day to close at $21.625. Recently it has been selling at $27.25, a gain of 28% vs. 7% for Standard & Poor's 500.

There is nothing new, of course, in the observation that going public creates wealth—or at least makes palpable the latent and putative wealth in a private company. A lot of people made fortunes that way in the 1960s before the equity market as a whole went into a profound slump. But while the mechanics of instant enrichment are the same, many of the players in the present market are more sophisticated.

After inflation, probably the biggest booster of the size of the new offerings is the size of the new buyers. In past booms underwriters played largely to a retail market, as promoters of penny stocks and $5 stocks still do. Today the big action comes from institutions—pension funds, insurance companies, college endowment funds, bank trust departments, mutual funds. They are hungry for growth and less averse to risk than they once were. Their megabuck purchases have helped make initial offerings of $50 million to $80 million as commonplace as those of $10 million to $15 million a dozen years ago.

These days, moreover, the market for new stocks is international. In recent years Europeans have become increasingly important buyers. Hambrecht & Quist, the San Francisco investment banking firm, sells about a third of its issues to European customers. The strong (some would say overvalued) dollar hasn't discouraged them; compared with most investment opportunities in Europe, almost anything from Silicon Valley looks enticing.

Many institutions buy the stocks for long-term appreciation, but a large number are flippers. "The money managers are all in the performance game these days," says Robert L. Cooney, a managing director of the New York investment banking firm of First Boston. "A lot play the flipper game. If they can make $2 to $4, they buy it and—bang—it's quickly back in the market."

NONETHELESS, having institutions as major players has brought an element of sanity to the business. In the past, when the market was primarily dependent on retail customers, underwriters favored small issues that could shoot way up when hyped; supercharged performance was deemed necessary to keep the customers coming back. Another factor discouraging "shooters" is that nowadays the financial officers (and financial backers) of companies going public realize more clearly than they once did that a swift, steep run-up in the price of a stock is a sign of too much money left on the table.

Hambrecht & Quist sells about a third of its issues to European customers. The strong dollar hasn't discouraged them; compared with most investments in Europe, almost anything from Silicon Valley looks enticing.

Generally speaking, the latest crop of companies going public includes more solid operations, with longer operating histories than those of the Sixties. For a few years now, companies have been able to survive and grow without going public because they've been nurtured by venture capital groups—a source of support that was far less significant in the Sixties. In the last few years venture capital firms have sprouted across the U.S. They raised $4.9 billion during the five years from 1978 to 1982, more than ten times the money attracted in the prior eight years. With so much cash floating around, competition has been intense for entrepreneurs with promising "concepts" or technology to develop. Like the entrepreneurs, the venture capitalists get their big payoff when the company goes public, so naturally they get involved in discussions over price.

The underwriting firms that specialize in new companies are more professional too. In the 1960s the field was overrun with upstart firms such as the wildly prolific Charles Plohn & Co.—many of which, like Plohn, have since expired. In recent years the largest dollar volume of initial offerings has been handled by the so-called Four Horsemen—L.F. Rothschild Unterberg Towbin of New York, Alex. Brown & Sons of Baltimore, and two San Francisco firms, Robertson Colman & Stephens and Hambrecht & Quist. The Rothschild firm is the largest, with over 1,600 employees. The regional firms range in size from 75 employees (Robertson Colman) to 950 (Alex. Brown).

Some large investment banking firms—among them Shearson/American Express, Morgan Stanley, First Boston, E.F. Hutton, and Prudential-Bache—have been increasingly active. Morgan Stanley rarely underwrote new public companies until recently. It was the lead underwriter in bringing Apple Computer's $111-million public offering in 1980. (Apple came out at $22 and was recently selling at $49.) This year Morgan's major success has been Apollo.

The big securities firms, along with the Four Horsemen, float the larger and more solid companies with issues of $10 million and more. Below the top comes a second tier of underwriters, of which D.H. Blair & Co. and Rooney Pace, two Manhattan firms, are most prominent. They bring out far more speculative companies, often with no operating history at all. The prices in this arena are lower—generally under $10 a share—and the issues are smaller. Then there is the third tier—the penny stock promoters—where the ventures become pure blue-sky visionary. But in the present market euphoria, everybody seems to be doing well.

For investment bankers, the business is lucrative. The underwriters' take—the "spread," as the industry calls it—ranges between 6% and 7½% of the price paid by the buyers, which means $3 million or more on a $50-million deal. One-fifth of that goes to the managing underwriters, the firms whose names grace the front cover of the prospectus; sometimes it is only one firm, sometimes two or three. The rest of the spread is divided among the members of the syndicate—generally several score of firms—in proportion to what they actually underwrite and sell.

Competition for clients is vigorous. At times investment bankers establish an early relationship aimed at locking in a client by putting up venture capital (some have their own venture capital funds), and, when the moment seems propitious, bring the companies public. Most of the businesses are labeled "high tech"—which is more likely to mean innovative adaptations of new technology than technological breakthroughs—and many are in the medical field.

The extent of the entrepreneur's early dependence on venture capital and other financial backing largely determines whether he makes a killing when he goes public. K. Philip Hwang, the 47-year-old chief executive of Televideo, who was enriched the most this year, mainly financed his company out of earnings (see "The All-American Success Story of K. P. Hwang," FORTUNE, May 18, 1981). Hwang, a poor Korean immigrant who came to the U.S. in the 1960s, founded his company in 1976. He was remarkably unsuccessful at finding backers. Televideo began producing video-display terminals in 1979, prospering because Hwang knew how to manufacture cheaply. The company, which later moved into personal computers and mi-

RESEARCH ASSOCIATE *Elizabeth S. Silverman*

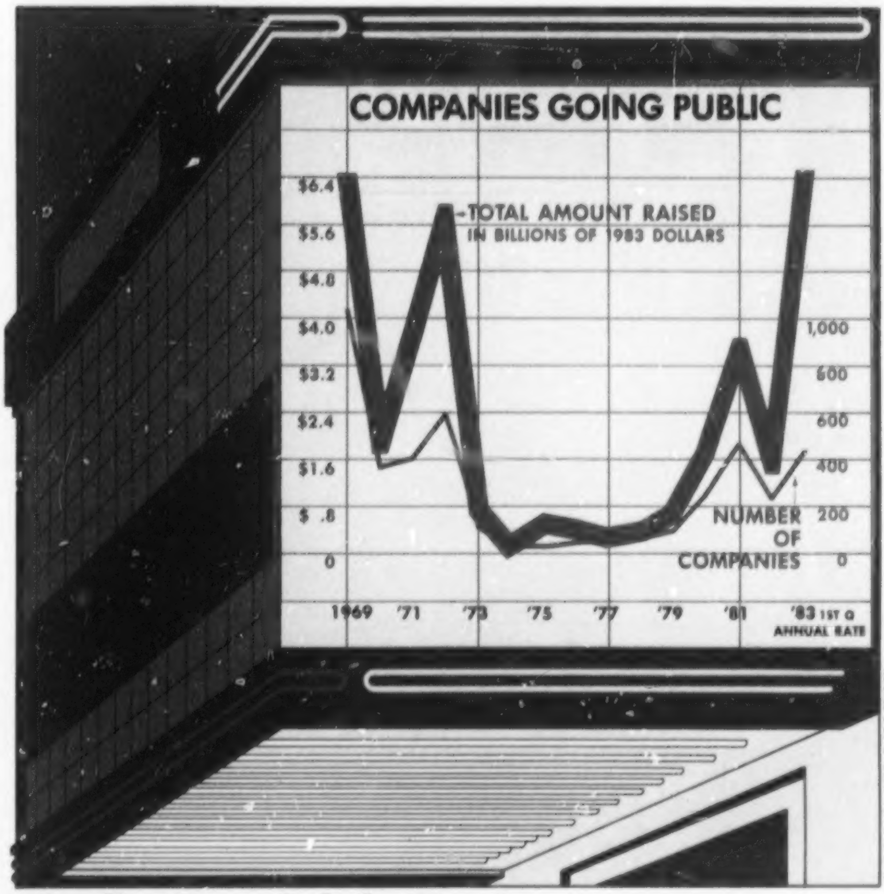
crocomputer systems, was profitable from the outset. Not until October 1981 did Hwang get an infusion of outside money—$5.25 million from a venture capital group. When Televideo went public two months ago, he owned 80.2% of it. Hwang sold 700,000 shares—which brought him $11,802,000—and he still holds stock (69% of the total), recently worth $769 million. Sometimes it pays not to have rich friends.

SIMILARLY, DAVID JACKSON, 45, the chief executive of Altos, a competitor of Televideo, made do without much help from outsiders during the formative years of his company, which has been profitable since it started in 1978. When Altos went public last fall, Jackson owned 63% and still held almost half after he sold around $6 million worth in the offering; the recent value of his remaining stake was $137 million. Jackson's total investment over the years was $98,000.

On the other hand, Allen H. Michels, who founded Convergent Technologies of Santa Clara in 1979, was compelled to give away large chunks of his company in return for $2.5 million from early backers. Michels contributed only $25,000 to his Silicon Valley operation, which makes computer work stations. Later he raised another $12 million privately. As a consequence, after the company went public last year, Michels owned only 4.4% of the shares. His stake, however, was worth over $11.5 million—and it has since more than tripled, along with the stock.

Winning the underwriting business from these entrepreneurs once they are headed for the public marketplace is often a matter of the chemistry between the client and investment banker. Michels, exuberantly irreverent, recently told how he selected Rothschild Unterberg Towbin. He had been talking to a number of underwriters when a friend of his alerted the Rothschild firm. Rothschild's representative rang up and a dinner meeting was scheduled at a Palo Alto restaurant.

Michels says that Vice Chairman Robert Towbin started with the wrong approach. "He began telling us all the reasons why both emotionally and professionally we would be comfortable with them. I voiced some objections—'This is rather quick, we just met you' and whatever. He slammed his hand down on the table and said, 'Look, what the f— do I have to do to get your business?' Now I can relate to that kind of dialogue. That one comment broke a lot of barriers because I felt I was dealing with a human being who badly wanted my business. I said, 'I think you have it, but I don't appreciate being run over by a tank and having Towbin stamped from my forehead to my toes.' "



SOURCE: GOING PUBLIC: THE IPO REPORTER

Standing Room Only for New Issues

Until now the biggest upsurge in initial offerings came in 1969, when the value of all such issues cleared with the SEC came to $2.6 billion ($6.4 billion in 1983 dollars). The volume in the first quarter of this year, $1.62 billion, if annualized, would top the inflation-adjusted 1969 figure. Fewer companies are going public now, but the offerings are much larger than they used to be.

Michels subsequently signed up. He adds, "I prefer not to discuss the arguments that Towbin made as to why we should go with them, but you can imagine what they might have been by looking at my nose and my behavioral characteristics." All of which is Michels's way of saying that he is Jewish and preferred to be with a Jewish firm. For his West Coast co-manager, however, Michels chose non-Jewish Hambrecht & Quist, which had helped bankroll him.

Televideo's Hwang also went with Towbin, though hardly for ethnic reasons. Hwang had been miffed in 1981 when Hambrecht & Quist rejected an overture to become his underwriter. A year later, Hwang says, H&Q sent him a letter suggesting that the company might now be ready for the market. "I threw it in the trash basket," says Hwang. Like Michels, he was charmed that Towbin personally solicited his business, and with Hwang Towbin didn't bang on the table.

Timing an offering can be more important than picking an underwriter. When the market is in the doldrums, it is possible to peddle a good company, but the price is likely to be low and sometimes the "window" almost closes. Thus there was relatively little activity in the first half of 1982. Convergent Technologies made it to the market in May, but had it waited six months it doubtless would have fetched a better price. Altos Computer waited. Initially it was thinking of going public in August. In July, with the stock market in a terrible state and Altos's earnings looking rosy, the company put the offering off until November. The market, of course, turned up in August and didn't look back. "It was a bit of luck," says David Zacarias, the chief financial officer. Altos had planned to issue three million shares at a price between $17 and $19. Instead it increased the issue to 3.3 million and raised the price to $21.

Pricing is a delicate art, as is "sizing," deciding how many shares are to be sold. After the preliminary prospectus is filed with the SEC, usually a month or six weeks before

BILL HAYWARD

Donald Hebb *heads investment banking at Alex. Brown & Sons, big in medical issues.*

MICHELLE SINGER

Sanford Robertson *of Robertson Colman & Stephens is a veteran midwife to new companies.*

the offering, the marketing people take over. They put on a "road show," taking company executives on a whirlwind tour of the financial centers of the U.S., and frequently of Europe, to tout the company before money managers and security analysts. The goal is to collect more tentative orders than can be filled. Buyers are reassured that an issue is desirable when they cannot get allotments as large as they would like. After the road show, and after the prospectus has emerged from the SEC, the pricing and sizing decisions are made. This happens after the market closes on the day before the formal offering.

MOST UNDERWRITERS say that the ideal price is one that will maximize the money raised and at the same time leave a little room for market appreciation—15% or 20% in the first day or two. On March 3, Morgan Stanley hit it just that way with Apollo. The computer company's competition is minimal and its management is highly regarded. So buoyant was the interest in Apollo that Morgan increased the size of the offering and raised the price to $22 from the $15-to-$18 range mentioned in the preliminary prospectus.

The same day that Apollo came to market, the folks at First Boston were meeting in New York with Gary B. Friedman, president of Fortune Systems, to price that issue. They were vastly encouraged by the market's reception of Apollo, and by the superficial similarity between the two companies. Like Apollo, Fortune makes computer work stations, but for the general rather than the scientific market. In the broader market, the competition includes Convergent Technologies, Altos, and Televideo, among others.

Nonetheless, First Boston was impressed by the volume of tentative orders for the stock; the firm increased Fortune Systems' issue from four million to five million shares, and raised its price to $22, which, as with Apollo, was a few dollars above the initial range. The issue bombed. Some would-be buyers changed their minds, and First Boston admits it had to "eat a little" of Fortune's stock, less than 5%. The first day out the stock traded below the opening price; recently it has been selling at $18.25. For First Boston it was a minor horror story; no underwriter wants customers to lose money on an issue.

Hambrecht & Quist made a grievous error in the other direction when it floated a $29,095,000 offering of a Chicago company called Information Resources Inc. at $23. The stock almost doubled before the day was out and was at $60 in early May. Red faces at H&Q, for the runaway price meant that the client in effect had been shortchanged. "We still haven't figured out what happened with that one," says William Hambrecht.

There is a heady aspect to all these price decisions, for in the high-tech area the multiples are extravagant. Some market veterans say multiples are higher than those for comparable companies in the Sixties. When issued, Apollo was priced at 55 times per share earnings for the next 12 months, as estimated by Wall Street analysts; Fortune Systems had a multiple of 45; Diasonics, a maker of medical imaging equipment, 44; Intecom, a manufacturer of communication switching equipment, 77. By comparison, IBM has a multiple of about 13 times this year's estimated earnings. In many cases a purchaser of these companies for the long term would have had to assume a corporate annual growth rate of 30% or 35% a year to justify the prices. Only with such growth for, say, five years could some of these companies attain an earnings level that would bring their price-earnings ratios in line with those of mature high-tech companies today. How many investors make such a calculation is unknowable; when the market becomes euphoric the "greater fool" theory—the idea that a buyer can find someone even less sensible to sell to—often takes over.

If there is a downdraft in the market, it is nonetheless a safe bet that the high-flying multiples will come thudding down. Says Allen Michels: "We will see a fallout. I believe that the price at which we went public was insane. I don't know how to set value, but I know insanity when I see it."

However insane the multiples, the market's appetite for new issues and the eagerness of companies to go public show no sign of abating. At the end of April, 158 companies had preliminary prospectuses at the SEC, up from 126 at the end of January. So the stampede of new issues will continue, probably until the bull market dies.

■ More than the "greater fool" theory justifies investors' interest in companies that go public. The overall performance of these new issues has lately been good. Of the 52 nonfinancial issues larger than $5 million that came out in 1980—a list recently compiled by Shearson/American Express—35 increased in value through March 31 of this year while 16 declined, and the median performance was a gain of 48.4%. The 24 high-tech issues did even better, showing a median rise of 79.1%. The comparable median for the S&P 500: up 20%. But there's a kicker in all this—you have to be a big customer to get an allotment of some issues from your broker. And it takes nerve as well as cash to buy everything. ■

LARRY DALE GORDON FOR MONEY

William Hambrecht *of Hambrecht & Quist has a knack for discovering high-tech companies.*

BILL HAYWARD

Thomas Unterberg and Robert Towbin *of L.F. Rothschild Unterberg Towbin lead in volume.*

JUNE 13, 1983
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FORTUNE

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MEET THE
LEAN, MEAN
NEW IBM

LET'S NOT SINK
FLOATING
EXCHANGE RATES

INSIDE THE
BATTLE OVER
TRANS WORLD

PLAYING THE NEW OIL GAME

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FORTUNE

The oil business is more of a gamble than ever these days, as Doug Johnson's gouache cover painting suggests. For the morning line on how U.S. oil companies plan to cope with the new uncertainties, see page 58.

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THE SERVICE

THE FORTUNE DIRECTORY OF THE LARGEST U.S. NON-INDUSTRIAL CORPORATIONS

■ This year FORTUNE introduces the Service 500 directory, a major expansion of the rankings of large non-industrial companies that FORTUNE has published annually since 1956. The new Service 500 comprises three 100-company rankings—of the largest diversified financial, diversified service, and commercial banking companies—and four 50-company rankings—of the largest life insurance, retailing, transportation, and utility companies. As a group, the Service 500 companies came through the economic crunch of 1982 in better shape than the FORTUNE 500 industrial corporations, whose earnings fell 27%.

The different industry groups in the Service 500 had widely varying results last year, however. The utility and diversified service companies turned in surprisingly strong performances overall, while the banks managed to keep earnings about even with the inflation rate of 6.1% as measured by the consumer price index. Life insurance companies got a boost from sales of annuity products. Revenues of the diversified financial companies and the retailers were up, but the profits of both groups fell slightly. Transportation companies as a group had an out-and-out bad year; total profits dived 40.5%.

Ten companies from last year's FORTUNE 500 are now at home among the non-industrials. These companies became ineligible for the 500 because sales from manufacturing and mining slipped below 50% of their total sales; in determining what activities constitute manufacturing and mining, FORTUNE relies on classifications by the U.S. Office of Management and Budget's regulatory and statistical analysis branch. FORTUNE uses these same government classifications in assigning companies to non-industrial categories. For example, Marriott will be found among the retailers rather than in the diversified service rankings with hotel operators, because more than half the company's revenues are derived from contract food services (such as supplying airline meals) and from non-hotel restaurants—businesses that the OMB classifies as retail activities.

The largest FORTUNE 500 company to join the non-industrials, ranking No. 2 among the diversified service companies, is RCA, whose revenues from such sources as broadcasting and car rentals now exceed revenues from electronics manufacturing. No companies went from a non-industrial to an industrial classification this year.

FORTUNE's expansion of the non-industrial rankings reflects the growing importance of the service sector, which generates two-thirds of the U.S. gross national product and provides seven of every ten nonfarm jobs. Though services and manufacturing are interdependent—services facilitate the production of goods and then create markets and distribution networks for them—direct comparisons between industrial and service companies are of limited value because their businesses are so different. Assume, as a simplified example, that IBM, a manufacturer, sells a computer to Sears, a retailer, for $100, and Sears resells it for $105. Sears would rank higher in sales than IBM, but the comparison tells little about either company or its relative business importance. The more informative comparison is between Sears and other retailers.

FORTUNE divides the Service 500 into seven categories in order to compare like with like. In each category the primary ranking of companies is by a measure the industry commonly uses as an indication of relative size and growth. Banks and life insurance companies rank themselves in terms of assets; retailers by sales.

As it has in the past, FORTUNE also ranks each company by up to ten different measures, with all the information in one table. For example, in the following tables each retailing company is ranked not only by sales, but also by assets, net income, stockholders' equity, number of employees, net income as percent of both sales and equity, earnings-per-share growth rate, and total return to investors in 1982 and from 1972 to 1982.

DIVERSIFIED SERVICE

For the diversified service companies as a group, sales were up 6%, about the same as inflation, and net income rose a crackerjack 9.4%. Halliburton, No. 4, the Dallas oil-field services giant, lumbered off with the top prize, a half-billion dollars in profit—down, however, $177 million from 1981. The secret behind the 96% earnings gain by MCA, No. 35, parent of Universal Pictures, is prominently pictured on page one of MCA's annual report: E.T., the extraterrestrial movie star.

Only four of these companies lost money in 1982, an admirable performance in a recession. The downside champ, with a $20-million loss, was Ramada Inns, No. 94, led to its fate by $68 million in interest payments on money borrowed primarily for construction of a recently opened Atlantic City casino.

COMMERCIAL BANKING

Citicorp swept past BankAmerica once again to claim the top spot in the bank rankings—the third year in a row the two megabanks have swapped places. Citicorp gained $11 billion in assets and posted a handsome 36% earnings increase in 1982, while BankAmerica ended the year with assets and earnings practically a carbon copy of 1981's. If BankAmerica's current bid for Seafirst, No. 28, succeeds, the California bank holding company will again displace Citicorp in next year's rankings—unless Citicorp does something equally dramatic.

The 100 banking companies on FORTUNE's expanded list averaged gains of 9.5% in assets and 5.7% in earnings. One in four banks among the 100 increased earnings more than 25%, including two besides Citicorp in the top 15: InterFirst, No. 14 (40.82%), and Bankers Trust, No. 9 (27.16%). Twenty-three banks had profit declines in 1982, most significantly Chase Manhattan, No. 3, with a 25.4% decline, and Continental Illinois, No. 7 (minus 69.41%).

DIVERSIFIED FINANCIAL

More than a third of the 100 largest publicly held diversified financial companies lost money in 1982, but 32 of the 35 losers were savings and loan associations, members of an industry that seems to have begun a cautious recovery. Nine S&Ls on the list made money. The three that posted the biggest profits aggressively expanded beyond home mortgages: Financial Corp. of America, No. 21, City Federal, No. 31, and Homestead, No. 97. City Federal's 297% total return to investors—a measure combining stock-price appreciation and dividends—was tops for 1982, while FCA's ten-year average return of 32% was the highest in that category.

The brokerage houses on the list did well: their collective net income was up 47%. And assets for the 100 diversified financial companies grew 18%, thanks in part to mergers. INA and Connecticut General combined to form CIGNA, No. 3. American General, No. 9, acquired both NLT Corp. and Credithrift Financial, and now-troubled Baldwin-United, No. 15, bought MGIC Investment.

LIFE INSURANCE

Life insurance in force increased by 9% for the 50 largest insurers in 1982, the smallest increase since 1975. The group's fastest-growing product was not insurance but single-premium deferred annuities, which are essentially investment vehicles with tax advantages. The year's four newcomers—National Investors Pension, No. 26, Executive Life, No. 36, Charter Security Life, No. 47, and Kemper Investors Life, No. 50—do most or all of their business in annuities.

Total assets stayed ahead of inflation, growing 9.6%. In net gains from operations, which fell 1% from 1981 for the group as a whole, several old-timers—Prudential, No. 1 as usual, Mutual of New York, No. 13, and Continental Assurance, No. 20—bucked the trend to improve on their 1981 performances by 691%, 340%, and 383%, respectively.

RETAILING

Sales of the 50 largest retailers were up 11.4% to $246 billion, but net income dropped 0.2%. Much of the earnings stagnation can be attributed to the mammoth losses of $353 million by F.W. Woolworth, No. 12; $102 million by A&P, No. 13; and $249 million by Wickes Companies, No. 31. (Wickes is in Chapter 11 limbo.)

Best Products, No. 42, a Richmond-based catalogue-showroom merchandiser, grew faster than any other company in the group, increasing sales 58%. The 1981 sales growth champ, Wal-Mart, trailed Best, at 41%; Wal-Mart climbed nine spots on the list to No. 21 and also posted an earnings increase of 50%. Sears Roebuck, No. 1 for the 19th year in a row, rode strong performances by its merchandising and financial services divisions to a 32% profits increase.

TRANSPORTATION

Pan American, No. 8, lost $485 million and Braniff International, No. 42, lost $351 million, leading the 50 largest transportation companies in a collective profits nose dive of 40.5%. Pan Am's loss was the biggest among Service 500 companies. Braniff, of course, succumbed in mid-1982, filing for bankruptcy and ceasing operations. Overall, 12 of the 17 passenger airlines suffered earnings declines in 1982. The ten railroads, which performed admirably in 1981, saw their net income tumble last year by nearly 30%. Motor carriers had an earnings free-fall of 53%.

UTILITIES

Turmoil in the natural gas market caused all but four of the 12 utilities that derive most of their revenues from gas to report lower earnings in 1982. Only two of the 35 electric utilities on the list had lower earnings in 1982 than in 1981: American Electric Power of Ohio, No. 6, and Houston Industries, No. 18, which had to bite the bullet on a $168-million after-tax charge against operations for a canceled nuclear plant.

Operating revenues for the 50 utilities rose 10.7%, and earnings went up 10%. Pacific Lighting of Los Angeles, No. 46, had the biggest revenue gain, 30%, followed by Texas Eastern, No. 30, with a 25% increase. InterNorth, No. 35, emerged as the most profitable utility for investors, averaging a 15.93% annual total return over the last decade. General Public Utilities, No. 22, still smarting from the 1979 Three Mile Island accident, had the worst ten-year record for investors. —JOHN PAUL NEWPORT JR.

THE 100 LARGEST DIVERSIFIED SERVICE COMPANIES RANKED BY SALES

RANK		COMPANY	SALES[1]	ASSETS		NET INCOME		STOCKHOLDERS' EQUITY	
1982	1981		$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK
1	1	**Phibro-Salomon** (New York)[2]	26,703,000	39,669,000	1	337,000	2	1,769,000	4
2	•	**RCA** (New York)[3]	8,237,000	7,743,300	2	222,600	6	1,887,700	2
3	3	**Fluor** (Irvine, Calif.)[4]	7,335,724	4,700,990	6	152,799	11	1,776,419	3
4	2	**Halliburton** (Dallas)	7,281,793	5,581,504	5	496,845	1	3,482,085	1
5	•	**City Investing** (New York)	5,894,000	7,554,500	3	131,100	13	1,187,800	8
6	•	**Farmland Industries** (Kansas City, Mo.)[6,7]	5,614,439	1,996,016	12	N.A.[5]		481,108	27
7	4	**Super Valu Stores** (Eden Prairie, Minn.)[8]	4,622,444	685,068	50	64,721	34	277,265	51
8	5	**Foremost-McKesson** (San Francisco)[9]	4,609,618	1,384,799	21	73,537	29	481,343	26
9	6	**CBS** (New York)	4,052,271	2,682,874	8	112,509	15	1,334,597	5
10	7	**Fleming Companies** (Oklahoma City)	3,688,011	597,917	55	29,368	54	230,458	55
11	10	**American Hospital Supply** (Evanston)	3,094,900	2,018,400	11	229,500	5	1,185,500	9
12	19	**Hospital Corp. of America** (Nashville)	2,976,912	3,601,143	7	171,935	9	1,254,711	7
13	12	**Alco Standard** (Valley Forge, Pa.)[10]	2,851,999	920,880	40	61,550	37	362,741	40
14	14	**American Broadcasting** (New York)	2,640,753	1,922,292	14	160,027	10	1,097,955	10
15	11	**Associated Milk Producers** (San Antonio)	2,634,778	364,439	74	N.A.[5]		106,131	77
16	•	**Avco** (Greenwich, Conn.)[11,12]	2,622,676	6,037,660	4	72,400**	30	1,067,193	11
17	8	**Tesoro Petroleum** (San Antonio)[10]	2,439,053	840,269	46	50,139	41	378,127	36
18	16	**Pittston** (Greenwich, Conn.)	2,420,740	1,402,438	20	(11,692)	90	619,093	16
19	20	**Morrison-Knudsen** (Boise)	2,360,909	893,273	43	39,273	48	294,239	49
20	9	**AGRI Industries** (Des Moines)[6]	2,317,988	244,662	88	N.A.[5]		53,413	94
21	13	**Grain Terminal Association** (St. Paul)[13]	2,309,463	547,753	58	N.A.[5]		171,315	63
22	21	**Turner Construction** (New York)	2,235,902	476,743	64	10,739	78	41,939	95
23	17	**Amfac** (Honolulu)	2,209,538	1,421,869	19	34,208	51	488,660	23
24	18	**Malone & Hyde** (Memphis)[14]	2,192,868	611,431	70	27,759	56	171,155	64
25	22	**Ryder System** (Miami)	2,075,871	1,985,020	13	82,614	23	557,918	19
26	15	**IU International** (Wilmington)	2,070,093	1,281,838	24	33,367	52	336,234	42
27	23	**Petrolane** (Long Beach, Calif.)[10]	1,978,151	1,050,755	32	104,340	17	511,513	20
28	29	**Wetterau** (Hazelwood, Mo.)[9]	1,957,198	327,061	78	1,849	86	97,742	81
29	27	**Genuine Parts** (Atlanta)	1,936,524	783,580	47	100,167	18	581,915	17
30	•	**Castle & Cooke** (Honolulu)[15]	1,823,233	1,116,693	31	12,530**	73	465,210	28
31	24	**Holiday Inns** (Memphis)	1,755,349	1,708,007	16	75,980	26	942,962	13
32	30	**Sysco** (Houston)[14]	1,713,393	435,556	67	34,209	50	207,685	58
33	•	**Whittaker** (Los Angeles)[4,17]	1,673,604	919,664	41	58,688	38	335,120	43
34	40	**Raymond International** (Houston)	1,638,336	496,764	63	12,203	75	155,730	66
35	35	**MCA** (Universal City, Calif.)	1,587,618	1,641,134	17	176,198	8	1,022,365	12
36	32	**Humana** (Louisville)[6]	1,516,311	1,745,170	15	127,146	14	385,212	34
37	•	**Farm House Foods** (Milwaukee)[9]	1,463,793	273,608	84	3,932	82	25,891	98
38	34	**Dun & Bradstreet** (New York)	1,461,566	998,440	35	142,122	12	504,191	22
39	36	**S.M. Flickinger** (Buffalo)[18]	1,337,491	182,515	92	10,239	79	68,024	89
40	•	**Eastern Gas & Fuel Associates** (Boston)	1,331,788	1,344,729	23	66,116	33	510,741	21
41	38	**Fischbach** (New York)[10]	1,271,363	465,141	65	25,743	59	153,247	67
42	•	**Bally Manufacturing** (Chicago)[19]	1,254,415	1,014,930	34	90,978	21	485,866	24
43	42	**Universal Leaf Tobacco** (Richmond, Va.)[14]	1,252,646	419,319	69	34,271	49	197,071	59
44	37	**Parsons** (Pasadena, Calif.)	1,213,997	530,174	60	42,794	46	176,816	62
45	•	**Avnet** (New York)[14,20]	1,171,171	623,099	54	70,470	32	483,363	25
46	•	**National Medical Enterprises** (Los Angeles)[13]	1,167,073	1,203,194	27	75,237	28	451,849	30
47	•	**Dorchester Gas** (Dallas)[6,21]	1,159,101	533,468	59	17,812	65	138,918	69
48	28	**Dravo** (Pittsburgh)	1,157,117	640,861	52	(4,540)**	89	241,015	53
49	50	**American Medical International** (Beverly Hills)[6]	1,154,689	1,219,817	26	78,811	24	386,530	33
50	41	**Dairymen** (Louisville)[6]	1,152,430	247,778	87	N.A.[5]		82,939	87

THE DEFINITIONS AND CONCEPTS UNDERLYING THE FIGURES IN THIS DIRECTORY ARE EXPLAINED ON PAGE 176.

•Not on last year's list.

N.A. Not available.

[1] Net sales include all operating revenues and revenues from discontinued operations when they are published. All figures are for the fiscal year ending December 31, 1982, unless otherwise noted. Sales of subsidiaries are included when they are consolidated. All companies on the list must have derived more than 50% of their revenues from non-manufacturing and/or non-mining businesses. Excluded (but eligible for the lists that follow) are companies deriving more than 50% of their revenues solely from banking, life insurance, finance, retailing, transportation, or utilities.

[2] Name changed from Phibro on May 20, 1982.

[3] Company was No. 44 on the 1981 FORTUNE 500.

[4] Figures are for fiscal year ending October 31, 1982.

EMPLOYEES NUMBER	EMPLOYEES RANK	NET INCOME AS PERCENT OF SALES PERCENT	SALES RANK	STOCKHOLDERS' EQUITY PERCENT	STOCKHOLDERS' EQUITY RANK	EARNINGS PER SHARE 1982 $	1981 $	1972 $	1972-82 GROWTH RATE PERCENT	1972-82 GROWTH RATE RANK	TOTAL RETURN TO INVESTORS 1982 PERCENT	1982 RANK	1972-82 AVERAGE PERCENT	1972-82 AVERAGE RANK
6,730	56	1.3	73	19.1	23	4.97	4.23	0.61	23.34	15	94.00	6	21.95	13
109,500	1	2.7	50	11.8	64	2.03	(0.19)	2.05	(0.10)	74	29.45	44	0.44	82
43,111	6	2.1	55	8.6	72	1.94	2.83	0.15	29.17	7	(32.33)	79	12.39	41
83,748	2	6.8	24	14.3	50	4.21	4.72	0.63	20.92	23	(29.06)	77	6.10	62
63,000	4	2.2	53	11.0	66	3.64	2.53	2.30	4.70	66	39.79	38	14.88	36
9,300	46	—		—		N.A.	N.A.	N.A.	—		—		—	
19,500	23	1.4	69	23.3	12	1.77	1.53	0.27	20.69	24	34.50	39	27.93	5
16,600	27	1.6	64	15.3	42	4.59	4.33	2.02	8.55	64	15.84	54	14.01	38
22,167	20	2.8	47	8.4	74	4.01	5.86	2.88	3.37	68	32.05	43	6.57	59
11,360	41	0.8	76	12.7	62	1.98	1.72	0.60	12.68	52	79.93	9	20.12	21
32,800	11	7.4	19	19.4	20	3.18	2.05	0.66	17.03	31	60.48	21	3.91	72
76,000	3	5.8	29	13.7	52	2.25	1.67	0.23	25.62	13	63.25	18	20.17	19
16,700	26	2.2	54	17.0	31	2.95	2.88	0.54	18.51	30	60.46	22	24.45	9
13,800	35	6.1	27	14.6	49	5.54	5.13	1.40	14.75	39	74.19	12	12.59	40
3,500	81	—		—		N.A.	N.A.	N.A.	—		—		—	
25,521	18	2.8	48	6.8	81	3.14**	3.14	2.30	3.16	69	46.92	33	8.52	52
3,400	82	2.1	56	13.3	58	2.90	4.84	1.33	8.11	65	(13.62)	68	1.36	79
12,812	38	—		—		(0.31)	1.13	0.75**	—		(41.10)	85	5.97	64
24,502	19	1.7	61	13.3	56	3.86	3.66	0.81	16.90	32	(2.80)	58	19.08	26
650†	97	—		—		N.A.	N.A.	N.A.	—		—		—	
3,600	79	—		—		N.A.	N.A.	N.A.	—		—		—	
2,520	86	0.5	82	25.6	8	5.43	4.65	1.48	13.88	44	17.82	52	16.57	32
28,000	15	1.5	66	7.0	80	2.27	3.04	2.16	0.50	73	3.55	57	3.88	73
7,400	52	1.3	72	16.2	37	3.52	2.33	1.06	12.75	51	108.91	2	8.09	53
19,936	22	4.0	35	14.8	46	3.73	3.73	1.11	12.89	50	79.91	10	6.21	61
32,000	12	1.6	63	9.9	68	1.44	3.35**	1.90	(2.73)	76	27.26	45	4.97	68
16,712	25	5.3	30	20.4	14	2.00	1.90	0.32	20.11	25	(16.17)	69	8.64	51
4,550	70	0.1	87	1.9	86	0.25	2.13	0.84	(11.41)	80	50.90	29	3.68	74
12,860	37	5.2	31	17.2	29	2.77	2.80	0.75	13.96	43	45.75	35	20.27	17
36,000	10	0.7	80	2.7	85	0.29**	1.44[16]	0.55	(6.20)	79	(5.12)	63	4.38	70
42,051	7	4.3	33	8.1	75	1.94	3.66	1.38	3.46	67	33.59	40	1.59	78
7,200	53	2.0	58	16.5	35	1.71	1.41	0.37	16.54	34	100.05	3	19.79	23
17,300	24	3.5	39	17.5	26	3.77	4.40	0.29	29.24	6	(19.85)	74	15.29	34
14,000†	32	0.7	78	7.8	77	1.94	2.66	0.59**	12.64	53	(36.36)	82	10.93	45
16,500	28	11.1	9	17.2	28	3.69	1.89	0.48	22.62	19	75.62	11	21.63	14
39,100	9	8.4	17	33.0	6	2.14	1.55	0.11	34.56	4	95.43	5	39.69	1
4,800	69	0.3	85	15.2	43	0.51	0.50	0.07	21.97	20	(36.65)	83	—	
26,000	17	9.7	12	28.2	7	5.06	4.33	1.32	14.38	41	60.58	20	13.74	39
7,119	54	0.8	77	15.1	44	3.46	3.09	0.89‡	14.54	40	70.97	13	19.43	25
8,470	49	5.0	32	12.9	60	2.91	2.65	0.80	13.78	45	(5.39)	64	11.84	43
13,500†	36	2.0	57	16.8	33	7.59	6.59	2.58	11.39	58	32.61	41	1.13	80
12,500	39	7.3	20	18.7	24	3.20	3.03	0.46	21.41	22	(18.17)	72	3.61	75
1,350	95	2.7	49	17.4	27	3.93	3.55	0.91	15.75	36	16.43	53	18.10	29
8,600	47	3.5	38	24.2	10	2.31	2.01	0.26	24.41	14	(3.47)	59	23.48	10
8,000	50	6.0	28	14.6	48	4.03	3.90	1.12	13.66	47	32.25	42	22.53	12
40,100	8	6.4	25	16.7	34	1.60	1.24	0.14	27.58	9	69.35	14	29.85	4
1,300	96	1.5	67	12.8	61	1.01	1.72	0.13	22.75	17	(34.52)	81	14.67	37
11,570	40	—		—		(0.38)**	1.31	0.97	—		(21.07)	75	7.61	54
30,000	14	6.0	23	20.4	15	2.25	1.60	0.38	19.46	28	42.87	37	15.04	35
4,899	66	—		—		N.A.	N.A.	N.A.	—		—		—	

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[5] Cooperatives provide only net margin figures, which are not comparable with the net income figure in these listings.

[6] Figures are for fiscal year ending August 31, 1982.

[7] Company was No. 64 on the 1981 FORTUNE 500.

[8] Figures are for fiscal year ending February 28, 1982.

[9] Figures are for fiscal year ending March 31, 1982.

[10] Figures are for fiscal year ending September 30, 1982.

[11] Company was No. 20 on the 1981 Diversified Financial list.

[12] Figures are for fiscal year ending November 30, 1982.

[13] Figures are for fiscal year ending May 31, 1982.

[14] Figures are for fiscal year ending June 30, 1982.

[15] Figures are for fiscal year ending June 19, 1982.

[16] FORTUNE estimate.

[17] Company was No. 221 on the 1981 FORTUNE 500.

[18] Figures are for fiscal year ending July 31, 1982.

[19] Company was No. 339 on the 1981 FORTUNE 500.

THE 100 LARGEST DIVERSIFIED SERVICE COMPANIES RANKED BY SALES

RANK		COMPANY	SALES[1]	ASSETS		NET INCOME		STOCKHOLDERS' EQUITY	
1982	1981		$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK
51	43	**Super Food Services** (Dayton, Ohio)[6]	1,128,511	132,901	98	3,619	85	32,503	96
52	•	**Nash-Finch** (St. Louis Park, Minn.)	1,117,714	178,500	94	11,559	77	86,670	85
53	•	**Bergen Brunswig** (Los Angeles)[6]	1,096,401	280,016	83	15,238	70	85,123	86
54	33	**Commercial Metals** (Dallas)[6]	1,076,735	213,613	90	9,528	80	108,917	76
55	39	**Centex** (Dallas)[9]	1,048,548	929,316	38	27,893	55	324,807	45
56	48	**CFS Continental** (Chicago)[10]	1,043,462	294,261	81	14,421	71	102,078	80
57	44	**Walt Disney Productions** (Burbank, Calif.)[10]	1,030,250	2,102,816	10	100,093	19	1,274,784	6
58	•	**Perini** (Framingham, Mass.)	980,635	259,892	86	15,347	69	91,089	84
59	•	**Ocean Drilling & Exploration** (New Orleans)	979,571	1,626,396	18	191,936	7	775,105	14
60	49	**Subaru of America** (Pennsauken, N.J.)[4]	977,856	212,252	91	39,477	47	102,477	79
61	•	**Waste Management** (Oak Brook, Ill.)	966,548	1,169,681	28	106,524	16	663,836	15
62	•	**Geico** (Eden Prairie, Minn.)[18]	959,947	2,372,855	9	29,575	53	219,034	57
63	46	**Univar** (Seattle)[8]	954,221	373,260	73	18,482	64	96,304	82
64	•	**Di Giorgio** (San Francisco)	920,578	336,135	77	6,362	81	117,421	74
65	45	**U.S. Home** (Houston)	864,169	753,793	49	12,114**	76	280,686	50
66	•	**Pacific Gamble Robinson** (Kirkland, Wash.)	836,878	141,240	97	3,781	84	53,886	93
67	•	**Suburban Propane Gas** (Morristown, N.J.)[10]	828,344	423,824	68	24,067	60	179,989	61
68	•	**Beverly Enterprises** (Pasadena, Calif.)	816,187	931,866	37	26,045	58	252,515	52
69	•	**MGM/UA Entertainment** (Culver City, Calif.)[6]	806,251	1,376,994	22	27,500	57	296,528	48
70	•	**W.W. Grainger** (Skokie, Ill.)	803,228	520,371	61	50,110	42	374,600	38
71	•	**Blount** (Montgomery, Ala.)[8]	769,347	342,250	76	12,431	74	80,746	88
72	•	**Transway International** (New York)	724,379	348,923	75	14,002	72	183,941	60
73	•	**Browning-Ferris Industries** (Houston)[10]	714,945	666,673	51	62,677	36	316,789	47
74	•	**Nike** (Beaverton, Ore.)[13]	693,582	375,473	72	49,036	43	131,960	70
75	•	**Western Co. of North America** (Fort Worth)	688,306	1,257,324	25	56,650	40	432,215	31
76	•	**Southern States Cooperative** (Richmond)[14]	684,834	286,549	82	N.A.[5]		130,055	71
77	•	**Sunkist Growers** (Sherman Oaks, Calif.)[4]	683,361	179,285	93	N.A.[5]		58,418	90
78	•	**Parker Pen** (Janesville Wis.)[8]	679,372	302,493	80	15,713	68	170,741	65
79	•	**Automatic Data Processing** (Clifton, N.J.)[14]	669,263	555,449	56	87,794	39	363,524	39
80	•	**Kaneb Services** (Sugar Land, Tex.)	646,696	877,505	45	64,172	35	318,521	46
81	47	**Landmark** (Columbus, Ohio)[6]	644,723	163,478	95	N.A.[5]		17,937	100
82	•	**A.C. Nielsen** (Northbrook, Ill.)[6]	643,826	441,553	66	44,191	45	223,356	56
83	•	**Union Equity Co-Operative Exchange** (Enid, Okla.)	639,555	145,560	96	N.A.[5]		56,993	91
84	•	**Computer Sciences** (El Segundo, Calif.)[9]	630,174	319,332	79	17,7[illegible]1	66	119,681	73
85	•	**Zapata** (Houston)[10]	625,371	1,168,463	29	95,346	20	403,962	32
86	•	**Parker Drilling** (Tulsa)[6]	615,861	928,294	39	76,335	25	383,053	35
87	•	**Kay** (Alexandria, Va.)	613,164	261,995	85	3,833	83	31,018	97
88	•	**DEKALB AgResearch** (DeKalb, Ill.)[6]	606,500	879,000	44	19,000	63	378,000	37
89	•	**Early & Daniel Industries** (Indianapolis)[13]	605,275	74,592	100	(721)	88	20,144	99
90	•	**Caesars World** (Los Angeles)[18]	604,952	548,054	57	844	87	105,867	78
91	•	**Hilton Hotels** (Beverly Hills)	599,519	938,321	36	83,373	22	568,501	18
92	•	**Servicemaster Industries** (Downers Grove, Ill.)	594,955	81,512	99	21,576	61	54,775	92
93	•	**Pioneer Hi-Bred International** (Des Moines)[6]	557,398	512,796	62	71,604	31	332,938	44
94	•	**Ramada Inns** (Phoenix)	548,321	783,568	48	(19,825)	91	139,297	68
95	•	**Interpublic Group of Companies** (New York)	545,322	624,103	53	19,777	62	128,763	72
96	•	**SEDCO** (Dallas)[14]	544,619	903,856	42	260,009	4	350,965	41
97	•	**Anixter Bros.** (Skokie, Ill.)[18]	537,761	231,565	89	16,177	67	94,806	83
98	•	**Metromedia** (Secaucus, N.J.)	527,674	1,039,618	33	309,153	3	114,608	75
99	•	**Rollins** (Atlanta)[14]	526,468	399,562	71	46,035	44	240,831	54
100	•	**Reading & Bates** (Tulsa)	516,824	1,141,746	30	75,610	27	463,013	29
		TOTALS	190,539,081	148,296,409		6,145,837		41,639,484	

[20] Company was No. 266 on the 1981 FORTUNE 500.
[21] Company was No. 390 on the 1981 FORTUNE 500.

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS			
		SALES		STOCKHOLDERS' EQUITY					1972-82 GROWTH RATE		1982		1972-82 AVERAGE	
NUMBER	RANK	PERCENT	RANK	PERCENT	RANK	1982 $	1981 $	1972 $	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK
1,936	92	0.3	84	11.1	65	1.78	1.66	0.57	12.06	56	59.70	24	18.32	28
4,880	67	1.0	74	13.3	57	3.40	3.17	1.07	12.26	55	—		—	
2,423	88	1.4	70	17.9	25	1.69	1.39	(0.57)‡	—		63.63	17	24.45	8
2,532	85	0.9	75	8.7	71	2.21	2.53	0.61	13.74	46	22.93	50	17.15	31
4,000	75	2.7	51	8.6	73	2.11	5.16	0.88	9.14	62	62.12	19	5.25	67
4,000	76	1.4	71	14.1	51	2.57	2.12	0.97	10.23	61	109.44	1	6.38	60
28,000	16	9.7	13	7.9	76	3.01	3.72	1.32	8.59	63	23.34	49	2.69	77
10,700†	43	1.6	65	16.8	32	4.65	4.55	1.58**	11.40	57	(13.07)	67	20.39	16
4,464	71	19.6	3	24.8	9	3.71	3.36	0.33	27.38	10	(3.83)	60	3.29	76
650	98	4.0	34	38.5	4	6.52	4.36	N.A.	—		67.60	16	—	
16,300	29	11.0	10	16.0	38	2.40	1.95	0.23	26.43	12	59.30	25	18.63	27
8,471	48	3.1	43	13.5	53	2.51	4.67	0.35	21.78	21	8.63	55	5.40	66
3,504	80	1.9	59	19.2	21	3.21	2.65	0.13	37.80	2	(34.49)	80	19.87	22
4,100	73	0.7	79	5.4	82	0.92	1.39	1.49	(4.71)	78	26.57	46	4.15	71
2,111	90	1.4	68	4.3	84	0.75**	0.69**	1.20	(4.59)	77	98.44	4	6.91	55
5,000	65	0.5	83	7.0	79	2.07	2.30	1.74	1.73	71	(3.95)	61	6.88	56
4,400	72	2.9	45	13.4	55	4.58	4.79	1.65	10.75	59	87.75	8	11.59	44
57,000	5	3.2	41	10.3	67	1.33	1.08	0.28**	16.86	33	57.59	26	25.06	7
3,200	83	3.4	40	9.3	69	0.55	0.68	N.A.	—		—		—	
5,560	61	6.2	26	13.4	54	3.50	3.95	1.00	13.35	48	47.19	32	5.63	65
7,400	51	1.6	62	15.4	40	2.04	1.32	0.54	14.22	42	24.84	47	15.96	33
5,721	58	1.9	60	7.6	78	2.14	3.87	1.97	0.83	72	24.06	48	9.05	48
14,000	32	8.8	14	19.8	18	2.07	1.65	0.51	15.04	38	68.85	15	8.91	49
3,600	78	7.1	21	37.2	5	2.74	1.52	N.A.	—		59.75	23	—	
5,368	62	8.2	18	13.1	59	1.27	2.28	0.06	35.70	3	(61.62)	88	25.64	6
2,100	91	—		—		N.A.	N.A.	N.A.	—		—		—	
1,652	93	—		—		N.A.	N.A.	N.A.	—		—		—	
6,765	55	2.3	52	9.2	70	0.92	2.23	0.15	19.89	26	5.41	56	17.30	30
15,000	31	8.6	16	15.9	39	1.71	1.57	0.29	19.42	29	49.13	30	6.08	63
5,026	64	9.9	11	20.1	16	2.62	2.37	0.58	16.28	35	(27.68)	76	10.55	46
1,600	94	—		—		N.A.	N.A.	N.A.	—		—		—	
21,389	21	6.9	22	19.8	19	3.94	3.21	0.93	15.53	37	46.24	34	9.68	47
325	100	—		—		N.A.	N.A.	N.A.	—		—		—	
13,900	34	2.8	46	14.9	45	1.31	1.82	(2.67)	—		45.75	36	20.27	18
4,857	68	15.2	4	23.6	11	4.73	3.81	0.61	22.73	18	(39.93)	84	12.01	42
5,239	63	12.4	9	19.9	17	2.65	2.75	0.21	28.86	8	(51.31)	87	6.62	57
3,653	77	0.6	81	12.4	63	1.06	(2.16)	0.40	10.24	60	(3.97)	62	6.62	58
6,200	57	3.1	42	5.0	83	1.46	2.70	1.12	2.69	70	(31.51)	78	(10.00)	83
325	99	—		—		(11.77)	(16.09)	10.63	—		—		—	
9,400	45	0.1	86	0.8	87	0.04	1.33	0.05‡	(2.21)	75	(17.14)	71	21.25	15
32,000	13	13.9	6	14.7	47	3.12	4.22	0.51	19.86	27	22.50	51	20.15	20
5,702	59	3.6	37	39.4	3	1.47	1.20	0.14	26.51	11	54.95	27	23.46	11
2,503	87	12.8	7	21.5	13	2.24	1.99	N.A.	—		(5.64)	65	—	
15,250	30	—		—		(0.73)	(1.12)	0.56	—		(16.30)	70	(10.36)	84
11,300	42	3.6	36	15.4	41	4.25	3.31	1.32	12.40	54	52.95	28	19.71	24
5,700	60	47.7	2	74.1	2	8.83	2.08	0.47	34.09	5	(19.76)	73	4.41	69
2,550	84	3.0	44	17.1	30	1.13	1.31	(0.05)	—		48.41	31	31.85	2
4,013	74	58.6	1	269.7	1	83.11	14.38	2.03	44.95	1	88.13	7	29.89	3
9,915	44	8.7	15	19.1	22	1.70	1.62	0.50	13.02	49	(10.57)	66	0.71	81
2,411	89	14.6	5	16.3	36	2.43	3.01	0.30	23.27	16	(43.64)	86	8.70	50
1,470,733														

THE 100 LARGEST COMMERCIAL BANKING COMPANIES RANKED BY ASSETS

RANK		COMPANY	ASSETS[1]	DEPOSITS		LOANS[2]		EMPLOYEES	
1982	1981		$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	NUMBER	RANK
1	2	**Citicorp** (New York)	129,997,000	76,538,000	2	87,692,000	1	60,600	2
2	1	**BankAmerica Corp.** (San Francisco)	122,220,806	94,341,795	1	75,846,022	2	85,266	1
3	3	**Chase Manhattan Corp.** (New York)	80,862,903	56,857,847	3	54,973,264	3	36,810	3
4	4	**Manufacturers Hanover Corp.** (New York)	64,040,552	43,824,670	4	45,293,124	4	27,870	5
5	5	**J.P. Morgan & Co.** (New York)	58,597,000	37,910,000	5	31,477,000	6	12,711	13
6	7	**Chemical New York Corp.**	48,274,842	27,998,414	8	30,597,660	7	19,535	7
7	6	**Continental Illinois Corp.** (Chicago)	42,899,424	28,175,021	7	33,339,165	5	12,930	12
8	8	**First Interstate Bancorp.** (Los Angeles)	40,884,296	30,542,067	6	23,394,941	9	31,903†	4
9	9	**Bankers Trust New York Corp.**	40,427,059	24,492,559	11	21,098,591	11	11,906	14
10	11	**Security Pacific Corp.** (Los Angeles)	36,991,034	25,848,489	10	26,094,632	8	27,058†	6
11	10	**First Chicago Corp.**	35,876,372	27,418,645	9	21,988,679	10	11,341	15
12	13	**Crocker National Corp.** (San Francisco)	24,938,759	18,194,526	12	16,185,632	13	15,600	9
13	12	**Wells Fargo & Co.** (San Francisco)	24,814,047	18,179,790	13	19,575,586	12	17,100	8
14	17	**InterFirst Corp.** (Dallas)	21,030,000	14,405,000	15	12,502,000	14	8,520†	22
15	15	**Mellon National Corp.** (Pittsburgh)	20,294,405	12,328,322	19	11,394,202	16	7,768†	27
16	14	**Marine Midland Banks** (Buffalo)[3]	20,238,764	15,056,936	14	12,114,171	15	11,017†	16
17	16	**Irving Bank Corp.** (New York)	19,514,285	14,152,624	16	9,958,650	19	9,600	18
18	18	**First National Boston Corp.**	18,267,397	11,674,496	23	10,589,838	18	13,000	11
19	21	**Texas Commerce Bancshares** (Houston)	18,217,000	13,212,000	18	9,843,000	21	8,279	23
20	19	**Northwest Bancorp.** (Minneapolis)	17,584,679	11,971,229	20	10,734,015	17	15,200†	10
21	22	**RepublicBank Corp.** (Dallas)[4]	17,218,299	11,941,666	21	9,943,208	20	7,848	24
22	20	**First Bank System** (Minneapolis)	16,899,365	11,876,865	22	9,217,727	23	10,004†	17
23	23	**First City Bancorp. of Texas** (Houston)	16,567,101	13,354,883	17	9,280,718	22	8,822	20
24	25	**Bank of New York Co.**	12,723,562	8,873,178	24	7,488,772	24	8,524	21
25	24	**NBD Bancorp.** (Detroit)	12,406,937	8,579,731	25	5,650,075	28	6,865	29
26	28	**NCNB Corp.** (Charlotte, N.C.)	11,559,531	7,921,593	27	5,703,386	27	7,784	25
27	33	**Mercantile Texas Corp.** (Dallas)	10,190,043	7,332,166	28	6,525,335	26	6,313	34
28	26	**Seafirst Corp.** (Seattle)	10,028,452	8,175,039	26	7,453,997	25	7,773	26
29	29	**Republic New York Corp.** (New York)	9,280,172	6,769,870	29	2,488,157	67	2,350	95
30	27	**European American Bancorp.** (New York)[5]	8,324,538	5,755,822	33	5,527,594	29	4,580	52
31	31	**Pittsburgh National Corp.**[6]	7,622,017	4,794,602	42	3,658,651	38	3,856	68
32	32	**Union Bank** (Los Angeles)[7]	7,545,283	5,436,326	37	4,383,089	30	5,246	39
33	39	**Comerica** (Detroit)[8]	7,378,332	5,872,282	30	3,056,397	51	5,226	40
34	34	**Southeast Banking Corp.** (Miami)	7,274,334	5,521,123	35	3,531,338	41	6,536	31
35	40	**Valley National Corp.** (Phoenix)	7,183,032	5,512,684	36	4,270,647	32	6,850	30
36	30	**Harris Bankcorp.** (Chicago)	7,136,793	4,896,521	41	3,984,860	35	3,846	69
37	46	**Barnett Banks of Florida** (Jacksonville)	6,932.141	5,759,447	32	3,352,081	45	8,888	19
38	•	**Southwest Bancshares** (Houston)	6,926,581	5,770,039	31	3,888,276	37	4,468	54
39	36	**Wachovia Corp.** (Winston-Salem)	6,916,367	4,933,250	40	3,625,575	39	6,333	32
40	47	**National City Corp.** (Cleveland)	6,823,425	4,487,730	44	2,934,222	57	4,239	59
41	41	**National Bank of North America** (New York)[9]	6,807,340	5,218,623	38	4,043,765	34	5,104	42
42	38	**Michigan National Corp.** (Bloomfield Hills)	6,504,137	5,543,929	34	4,360,694	31	7,700	28
43	35	**Philadelphia National Corp.**	6,301,254	4,171,725	48	3,265,581	47	4,815	49
44	37	**Northern Trust Corp.** (Chicago)	6,252,733	4,369,083	45	3,377,304	44	4,208	60
45	49	**First Union Corp.** (Charlotte, N.C.)	6,167,985	3,672,977	59	2,951,621	54	4,881	48
46	•	**Allied Bancshares** (Houston)	6,010,632	4,971,057	39	3,978,262	36	3,450	78
47	•	**Citizens & Southern Georgia Corp.** (Atlanta)	6,004,578	4,285,931	46	3,447,387	42	5,700	36
48	42	**Rainier Bancorp.** (Seattle)	5,864,656	4,260,405	47	4,130,987	33	5,181	41
49	45	**BancOhio Corp.** (Columbus, Ohio)	5,822,355	4,495,170	43	3,100,873	50	6,321	33
50	43	**U.S. Bancorp.** (Portland, Ore.)	5,756,309	4,077,298	53	3,566,754	40	5,424	38

•Not on last year's list.
N.A. Not available.

[1] As of December 31, 1982.

[2] Net of unearned discount and loan loss reserve. Figure includes lease financing.

[3] Company is 51% owned by Hongkong & Shanghai Banking Corp. (No. 25 among the 1981 Largest Commercial Banking Companies Outside the U.S.).

[4] Name changed from Republic of Texas Corp. on June 30, 1982.

[5] Company is wholly owned by six European banks, all of which are ranked on FORTUNE's list of the Largest Commercial Banking Companies Outside the U.S.

[6] Company merged with Provident National Corp. (rank: No. 76) to form PNC Corp. on January 19, 1983.

NET INCOME		STOCKHOLDERS' EQUITY		NET INCOME AS PERCENT OF EQUITY		EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS			
									1972-82 GROWTH RATE		1982		1972-82 AVERAGE	
$ THOUSANDS	RANK	$ THOUSANDS	RANK	PERCENT	RANK	1982 $	1981 $	1972 $	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK
723,000	1	4,815,000	1	15.0	22	5.60	4.20	1.78	12.14	14	35.36	14	2.48	69
451,474	2	4,577,036	2	9.9	73	3.03	3.02	1.40	8.03	52	1.85	69	2.64	67
307,483	4	3,136,413	3	9.8	75	7.73	11.56	4.67	5.17	73	(2.75)	72	5.22	53
294,925	5	2,473,518	5	11.9	58	7.78	7.48	2.70	11.16	21	25.03	33	8.02	34
394,200	3	2,710,000	4	14.5	26	9.53	8.44	3.31	11.15	23	31.91	21	6.94	45
240,560	6	1,944,635	6	12.4	54	8.41	8.71	3.13	10.39	31	19.17	48	9.45	21
77,887	25	1,709,895	8	4.6	93	1.95	6.44	2.28	(1.55)	89	(32.45)	95	2.70	66
221,242	9	1,789,145	7	12.4	55	5.35	5.83	2.00	10.34	32	(6.32)	76	8.56	28
239,034	7	1,405,750	11	17.0	9	8.34	6.89	3.27**	9.82	37	15.64	52	8.78	24
234,314	8	1,489,422	10	15.7	16	7.84	7.05	2.28	13.15	9	(3.44)	74	9.61	19
136,785	14	1,491,333	9	9.2	80	3.33	2.98	2.31	3.72	80	0.39	70	0.19	76
71,594	28	1,177,007	12	6.1	91	3.62	4.02	3.32	0.87	86	(3.19)	73	5.77	51
138,638	13	1,100,435	14	12.6	46	5.81	5.33	2.12	10.61	29	12.92	56	5.16	54
207,000	10	1,115,000	13	18.6	5	3.80	3.21	0.90	15.49	5	(9.58)	80	6.05	48
134,372	15	1,067,614	15	12.6	48	5.73	5.88	2.28	9.65	40	9.16	61	10.51	14
86,972	21	883,256	21	9.8	74	4.54	4.24	3.39	2.96	84	(12.10)	81	2.10	71
81,014	24	762,743	23	10.6	69	9.13	11.02	3.22	10.98	26	(12.99)	83	9.84	18
124,401	16	884,074	20	14.1	31	6.67	6.25	2.35	11.00	24	17.27	50	7.50	39
170,000	11	872,000	22	19.5	4	5.35	4.49	0.96	18.74	1	(0.39)	71	12.05	7
89,093	20	1,037,601	16	8.6	84	3.08	3.85	1.83	5.34	72	10.76	58	2.37	70
143,831	12	888,430	18	16.2	11	5.18	5.01	1.18	15.94	4	(13.37)	84	7.87	36
114,714	18	913,184	17	12.6	49	7.66	6.38	3.41	8.43	48	10.83	57	(0.44)	78
120,251	17	887,098	19	13.6	40	3.52	4.22	1.10	12.33	13	(29.16)	93	4.92	55
73,247	27	505,220	28	14.5	27	10.18	8.50	4.26	9.10	44	23.61	40	9.89	17
81,650	23	749,981	24	10.9	66	6.69	5.31	2.93	8.61	47	34.71	15	8.66	26
76,140	26	530,044	27	14.4	29	3.18	3.22	1.43	8.32	49	32.18	19	(1.75)	81
101,998	19	551,518	26	18.5	6	4.15	3.67	1.00	15.29	7	(19.85)	91	—	
(91,349)	100	457,697	29	—		(5.66)	5.27	1.72	—		(36.61)	96	1.70	73
70,530	29	424,380	34	16.6	10	5.26	5.60	1.12	16.73	3	3.55	68	11.80	8
30,422	70	357,586	46	8.5	86	N.A.	N.A.	N.A.	—		—		—	
61,720	32	427,679	33	14.4	28	4.98	4.63	1.64	11.75	18	23.94	39	11.76	9
30,981	69	347,936	47	8.9	82	N.A.	N.A.	N.A.	—		—		—	
35,690	57	384,175	40	9.3	79	3.91	3.57	1.99	6.99	57	28.68	26	11.27	11
52,647	38	430,461	32	12.2	57	3.03	3.15	1.73	5.76	69	14.28	55	(0.84)	79
50,543	41	410,937	35	12.3	56	3.00	3.24	1.21	9.50	42	(17.98)	89	1.76	72
35,783	56	381,803	41	9.4	78	5.42	4.38	2.90	6.45	62	24.27	37	7.12	42
56,770	34	388,215	38	14.6	24	3.46	3.11	1.37	9.71	38	23.16	42	2.76	64
66,572	30	387,770	39	17.2	8	4.31	3.97	1.49	11.21	19	(15.04)	85	7.02	44
53,432	36	430,698	31	12.4	53	3.33	3.23	2.16	4.42	78	27.53	27	2.54	68
43,601	46	395,561	36	11.0	64	5.62	5.11	3.10	6.13	65	14.87	54	5.97	49
17,537	91	371,702	42	4.7	92	N.A.	N.A.	N.A.	—		—		—	
4,042	96	335,730	49	1.2	96	0.30	3.34	1.86	(16.68)	92	(24.00)	92	1.18	75
56,658	35	389,453	37	14.5	25	9.73	6.13	4.11	9.00	45	75.30	2	8.46	29
32,519	63	338,102	48	9.6	76	6.71	7.31	3.52	6.66	59	29.85	23	7.82	37
43,076	47	278,124	61	15.5	18	4.31	3.43**	2.03	7.82	53	14.97	53	3.92	61
82,348	22	368,541	43	22.3	2	2.78	2.42	0.75	14.00	8	(7.15)	77	—	
50,037	42	330,337	51	15.1	20	1.67	1.46	1.08	4.46	77	29.00	25	(3.46)	82
39,183	52	359,594	45	10.9	65	4.12	4.66	1.32	12.06	16	8.32	62	13.45	3
22,198	82	327,526	52	6.8	90	2.76	3.41	2.47	1.12	85	25.03	34	3.40	63
52,067	40	446,109	30	11.7	61	2.91	3.60	1.01	11.16	22	(15.23)	86	7.18	41

[7] Company is wholly owned by Standard Chartered Bank Ltd. (No. 46 among the 1981 Largest Commercial Banking Companies Outside the U.S.).

[8] Name changed from Detroitbank Corp. on July 1, 1982.

[9] Company is wholly owned by National Westminster Bank (No. 9 among the 1981 Largest Commercial Banking Companies Outside the U.S.).

THE 100 LARGEST COMMERCIAL BANKING COMPANIES RANKED BY ASSETS

RANK 1982	RANK 1981	COMPANY	ASSETS[1] $ THOUSANDS	DEPOSITS $ THOUSANDS	DEPOSITS RANK	LOANS[2] $ THOUSANDS	LOANS RANK	EMPLOYEES NUMBER	EMPLOYEES RANK
51	44	**AmeriTrust Corp.** (Cleveland)	5,753,475	4,160,356	49	3,403,218	43	4,113	62
52	•	**Mercantile Bancorp.** (St. Louis)	5,691,332	3,713,055	57	2,565,267	65	3,572	77
53	50	**First Pennsylvania Corp.** (Philadelphia)	5,432,841	3,495,847	66	3,103,618	49	3,604	76
54	•	**Shawmut Corp.** (Boston)	5,375,529	3,960,037	54	2,864,912	58	5,506	37
55	•	**Manufacturers National Corp.** (Detroit)	5,284,228	4,078,436	52	2,996,999	52	3,725	72
56	•	**Huntington Bancshares** (Columbus, Ohio)	5,244,858	3,955,039	55	2,789,780	62	4,453	55
57	48	**Centerre Bancorp.** (St. Louis)	5,122,499	3,494,341	67	2,511,021	66	3,674	74
58	•	**CBT Corp.** (Hartford)	5,069,859	3,691,033	58	2,787,545	63	4,391	56
59	•	**Bank of New England Corp.** (Boston)	5,065,355	4,088,983	51	2,938,326	56	4,249	58
60	•	**Maryland National Corp.** (Baltimore)	5,055,299	2,925,972	83	2,847,317	60	4,997	44
61	•	**Banc One Corp.** (Columbus, Ohio)	5,028,928	3,895,585	56	2,463,110	69	4,939	45
62	•	**Sun Banks of Florida** (Orlando)	5,004,141	4,095,263	50	2,239,480	75	5,741	35
63	•	**First National State Bancorp.** (Newark)	4,867,790	3,641,062	61	2,424,898	71	4,062	63
64	•	**United Virginia Bankshares** (Richmond)	4,847,711	3,463,541	68	3,299,567	46	4,915	46
65	•	**First Wisconsin Corp.** (Milwaukee)	4,836,179	3,532,835	64	2,983,133	53	5,013	43
66	•	**Girard** (Philadelphia)	4,812,064	3,171,234	72	3,188,974	48	3,868	67
67	•	**Texas American Bancshares** (Fort Worth)	4,717,155	3,662,469	60	2,800,637	61	3,109	87
68	•	**First Security Corp.** (Salt Lake City)	4,608,987	3,319,124	70	2,857,925	59	4,543	53
69	•	**Fleet Financial Group** (Providence)	4,535,572	3,057,987	75	2,691,290	64	3,869	66
70	•	**Trust Co. of Georgia** (Atlanta)	4,519,559	3,017,811	81	2,063,763	79	4,628	51
71	•	**First Atlanta Corp.**	4,480,046	3,046,141	78	2,485,334	68	4,013	64
72	•	**Midlantic Banks** (Edison, N.J.)	4,338,734	3,535,244	63	2,374,157	73	3,663	75
73	•	**California First Bank** (San Francisco)[10]	4,156,440	3,576,149	62	2,949,826	55	3,721	73
74	•	**Bank of Tokyo Trust** (New York)[11]	4,135,001	3,506,813	65	2,452,525	70	416	100
75	•	**Hartford National Corp.**	4,127,897	3,321,958	69	2,059,891	80	3,910	65
76	•	**Fidelcor** (Rosemont, Pa.)	4,119,516	3,018,953	80	1,722,549	92	2,734	93
77	•	**Provident National Corp.** (Philadelphia)[12]	4,002,452	2,606,736	88	1,755,499	89	2,434	94
78	•	**State Street Boston Corp.**	3,914,980	2,483,107	96	1,348,780	100	3,800	70
79	•	**Society Corp.** (Cleveland)	3,910,973	3,019,872	79	1,796,541	86	3,103	88
80	•	**Lincoln First Banks** (Rochester, N.Y.)	3,891,904	3,014,516	82	2,316,583	74	3,245	81
81	•	**Virginia National Bankshares** (Norfolk)	3,874,158	3,107,331	74	2,127,501	77	4,901	47
82	•	**BanCal Tri-State Corp.** (San Francisco)	3,839,364	2,728,006	85	2,423,970	72	2,939	90
83	•	**First of America Bank Corp.** (Kalamazoo, Mich.)	3,820,043	3,293,183	71	2,063,771	78	4,293	57
84	•	**Riggs National Corp.** (Washington, D.C.)	3,715,648	3,053,836	76	1,606,819	97	2,022	97
85	•	**BayBanks** (Boston)	3,709,662	3,167,614	73	2,008,274	81	4,750	50
86	•	**Norstar Bancorp.** (Albany)	3,652,951	3,049,942	77	1,655,195	93	3,734	71
87	•	**United Banks of Colorado** (Denver)	3,522,248	2,645,182	87	2,230,806	76	3,213	83
88	•	**Florida National Banks of Florida** (Jacksonville)	3,498,496	2,719,362	86	1,652,240	94	4,137	61
89	•	**First Maryland Bancorp.** (Baltimore)	3,447,013	2,299,433	99	1,794,581	87	3,392	79
90	•	**Fidelity Union Bancorp.** (Newark)	3,408,752	2,757,134	84	1,806,757	84	3,200	84
91	•	**American Security Corp.** (Washington, D.C.)	3,406,894	2,568,657	90	1,805,067	85	1,454	99
92	•	**First Tennessee National Corp.** (Memphis)	3,392,116	2,512,240	93	1,637,587	95	3,226	82
93	•	**Bank of Virginia Co.** (Richmond)	3,353,246	2,530,131	92	1,999,147	82	3,035	89
94	•	**Commerce Bancshares** (Kansas City, Mo.)	3,342,976	2,544,625	91	1,547,137	98	3,182	85
95	•	**First Oklahoma Bancorp.** (Oklahoma City)	3,326,347	2,203,100	100	1,853,826	83	1,517	98
96	•	**IntraWest Financial Corp.** (Denver)	3,314,069	2,489,027	95	1,748,768	90	2,856	92
97	•	**AmSouth Bancorp.** (Birmingham, Ala.)	3,255,458	2,450,156	98	1,757,503	88	3,313	80
98	•	**United Jersey Banks** (Princeton)	3,232,127	2,590,795	89	1,623,029	96	2,912	91
99	•	**Dominion Bankshares** (Roanoke, Va.)	3,224,485	2,500,507	94	1,743,694	91	3,182	86
100	•	**Equimark Corp.** (Pittsburgh)	3,215,007	2,453,140	97	1,468,287	99	2,320	96
		TOTALS	1,355,892,472	948,946,345		820,521,929		804,737	

[10] Company is 76% owned by Bank of Tokyo Ltd. (No. 15 among the 1981 Largest Commercial Banking Companies Outside the U.S.).

[11] Company is wholly owned by Bank of Tokyo Ltd. (No. 15 among the 1981 Largest Commercial Banking Companies Outside the U.S.).

[12] Company merged with Pittsburgh National Corp. (rank: No. 30) to form PNC Financial Corp. on January 19, 1983.

NET INCOME		STOCKHOLDERS' EQUITY		NET INCOME AS PERCENT OF EQUITY		EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS			
									1972-82 GROWTH RATE		1982		1972-82 AVERAGE	
$ THOUSANDS	RANK	$ THOUSANDS	RANK	PERCENT	RANK	1982 $	1981 $	1972 $	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK
62,022	31	603,693	25	10.3	71	6.69	6.29	3.22	7.59	54	27.30	28	8.34	32
41,704	49	306,571	53	13.6	38	6.85	7.21	3.35	7.41	55	24.16	38	8.35	31
(26,755)	99	190,460	92	—		(1.66)	0.02	3.07	—		59.83	5	(15.46)	85
34,081	61	270,738	65	12.6	47	5.63	4.67	3.07	6.25	63	26.92	29	9.32	22
23,125	81	271,525	63	8.5	85	4.52	1.79**	3.06	3.98	79	45.43	10	7.92	35
29,297	71	209,624	80	14.0	34	5.27	4.76	1.68	12.11	15	7.10	65	11.65	10
23,263	80	287,200	58	8.1	87	3.05	4.61	2.24	3.13	83	(16.80)	88	7.09	43
31,016	68	271,125	64	11.4	62	5.36	4.77	1.89	10.99	25	16.99	51	9.52	20
35,679	58	248,440	72	14.4	30	7.93	7.51	2.58	11.88	17	35.81	13	14.84	2
40,836	51	300,118	56	13.6	37	5.11	4.92	2.00	9.83	36	7.48	64	1.46	74
57,521	33	362,186	44	15.9	15	3.60	3.30	1.07	12.90	10	67.85	4	—	
34,231	60	305,308	54	11.2	63	2.66	2.46	1.50	5.90	67	25.09	32	(0.96)	80
34,958	59	249,859	70	14.0	33	6.59	5.66	3.49	6.56	61	59.51	6	8.84	23
41,213	50	295,149	57	14.0	35	7.21	6.47	2.81	9.88	35	30.13	22	6.72	46
29,119	72	248,544	71	11.7	59	6.87	6.65	3.87	5.91	66	6.41	66	4.92	56
31,819	65	300,132	55	10.6	70	5.52	6.92	3.17	5.70	70	53.94	8	12.50	6
42,521	48	282,087	60	15.1	21	4.82	4.52	1.83	10.17	34	(12.39)	82	—	
53,084	37	333,620	50	15.9	13	4.42	3.39	1.53	11.19	20	8.27	63	4.24	58
39,037	53	225,864	79	17.3	7	6.28	5.30	2.84	8.26	50	35.82	12	6.16	47
52,487	39	254,971	68	20.6	3	3.54	2.01	0.85	15.33	6	24.89	35	8.38	30
38,393	55	259,775	67	14.8	23	3.61	3.14	1.12	12.42	12	25.38	31	8.09	33
38,814	54	244,061	74	15.9	14	7.74	6.48	3.11	9.55	41	33.52	16	8.56	27
16,442**	92	228,284	78	7.2	89	1.95**	2.68	1.98	(0.15)	88	10.21	59	—	
9,474	93	236,736	77	4.0	95	N.A.	N.A.	N.A.	—		—		—	
24,515	77	182,881	94	13.4	41	4.46	5.67	2.81	4.73	75	33.24	17	7.71	38
28,263	74	207,851	85	13.6	39	5.47	5.91	1.66	12.66	11	9.23	60	0.18	77
43,926	45	272,352	62	16.1	12	5.01	4.60	1.84	10.54	30	43.16	11	13.05	4
48,921	43	209,521	81	23.3	1	11.75	6.27	2.45	16.97	2	83.98	1	16.77	1
26,754	76	246,148	73	10.9	67	4.17	3.53	1.77	8.95	46	32.05	20	10.54	13
24,022	78	205,544	86	11.7	60	6.61	4.84	3.85	5.55	71	70.80	3	10.23	15
31,397	67	204,874	87	15.3	19	4.23	3.83	1.54	10.63	28	25.73	30	7.36	40
8,691	94	193,643	91	4.5	94	1.79	2.27	2.67**	(3.92)	90	(16.38)	87	(17.56)	86
20,718	86	164,168	97	12.6	45	4.13	3.03	1.90	8.07	51	22.77	43	—	
20,303	87	200,752	89	10.1	72	3.39	4.07	2.19	4.47	76	(4.44)	75	8.74	25
33,235	62	237,542	76	14.0	32	5.34	4.99	2.01	10.26	33	23.30	41	12.63	5
44,404	44	286,035	59	15.5	17	5.22	4.55	2.12	9.43	43	32.58	18	—	
21,406	84	199,206	90	10.7	68	2.19	2.96	1.33	5.11	74	(19.50)	90	5.93	50
21,329	85	270,564	66	7.9	88	2.28	1.83	1.30	5.78	68	24.62	36	3.92	62
23,981	79	179,649	95	13.3	42	4.50	4.55	2.31	6.90	58	4.50	67	4.17	59
1,761	97	202,262	88	0.9	97	0.46	4.63	4.37	(20.16)	93	21.59	45	3.96	60
28,664	73	207,988	84	13.8	36	3.93	3.62	1.43	10.64	27	20.70	46	10.14	16
26,785	75	208,307	83	12.9	44	2.90	2.73	1.44	7.25	56	18.23	49	(5.15)	84
21,710	83	173,831	96	12.5	51	3.77	2.68	2.06	6.23	64	53.08	9	2.74	65
31,477	66	253,648	69	12.4	52	6.37	2.17	5.88	0.80	87	19.24	47	5.53	52
18,532	88	208,756	82	8.9	83	1.87	2.53	0.99	6.57	60	(29.49)	94	—	
(11,916)	98	162,230	98	—		(2.11)	5.34	2.19	—		(8.12)	78	—	
31,900	64	241,199	75	13.2	43	4.21	4.00	1.67	9.69	39	29.27	24	—	
18,133	89	144,518	99	12.5	50	3.17	2.90	2.29	3.31	82	54.65	7	4.39	57
17,659	90	185,673	93	9.5	77	1.79	2.52	1.26	3.57	81	(8.34)	79	10.85	12
6,804	95	75,384	100	9.0	81	0.63	(11.10)	2.37	(12.41)	91	22.01	44	(3.60)	83
7,459,581		62,348,064												

THE 100 LARGEST DIVERSIFIED FINANCIAL COMPANIES RANKED BY ASSETS

RANK		COMPANY	ASSETS[1]	REVENUES[2]		NET INCOME		STOCKHOLDERS' EQUITY	
1982	1981		$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK
1	1	**Federal National Mortgage Assoc.** (Washington, D.C.)	73,466,703	7,329,752	5	(104,865)**	100	1,203,329	14
2	2	**Aetna Life & Casualty** (Hartford)	44,210,800	14,164,400	1	427,100	3	4,581,500	2
3	•	**CIGNA** (New York)[3]	31,395,300	11,786,900	2	516,900	2	4,607,900	1
4	3	**American Express** (New York)	28,311,000	8,093,000	4	581,000	1	3,039,000	3
5	4	**Travelers** (Hartford)	27,988,700	11,380,700	3	295,800	6	2,970,700	4
6	5	**Merrill Lynch & Co.** (New York)	20,697,239	5,026,201	6	308,831	5	1,432,882	9
7	9	**First Boston** (New York)	17,324,189	499,186	49	93,043	22	271,109	40
8	6	**H.F. Ahmanson** (Los Angeles)	16,863,863	2,014,906	16	(44,074)	96	725,212	22
9	15	**American General** (Houston)	13,275,800	2,913,200	13	221,300	7	1,795,400	7
10	8	**Great Western Financial** (Beverly Hills)	12,674,994	1,387,146	26	(76,458)	99	642,713	25
11	13	**Transamerica** (San Francisco)	10,423,338	4,326,295	8	186,234	11	1,682,235	8
12	10	**Loews** (New York)	10,402,247	4,747,085	7	215,824	8	1,425,941	10
13	12	**Lincoln National** (Fort Wayne, Ind.)	9,953,479	3,336,823	12	122,431	14	1,416,711	11
14	11	**First Charter Financial** (Beverly Hills)	9,387,592	1,009,484	33	(61,127)	98	633,893	27
15	24	**Baldwin-United** (Cincinnati)	9,382,685	3,598,010	9	66,322	28	397,500	32
16	17	**American International Group** (New York)	9,119,928	3,563,172	10	383,595	4	2,313,747	5
17	16	**Continental** (New York)	8,619,394	3,505,788	11	153,664	12	2,113,791	6
18	22	**E.F. Hutton Group** (New York)	7,364,740	1,596,487	22	81,082	24	414,703	31
19	23	**Golden West Financial** (Oakland, Calif.)	7,268,692	799,289	40	(19,848)	87	157,740	55
20	•	**FN Financial** (San Francisco)[5]	7,219,821	858,999	38	6,892**	57	273,552	39
21	32	**Financial Corp. of America** (Los Angeles)	6,650,290	775,280	41	27,349	41	122,280	63
22	19	**Walter E. Heller International** (Chicago)	6,647,218	886,125	37	16,360	50	347,710	34
23	34	**Kemper** (Long Grove, Ill.)	6,174,213	1,985,097	18	93,547	21	707,622	23
24	18	**Beneficial** (Wilmington)	6,063,000	1,603,500	21	(31,400)	93	785,300	20
25	25	**Donaldson Lufkin & Jenrette** (New York)	5,324,973	429,457	51	18,150	49	157,323	57
26	28	**St. Paul Companies** (Minn.)	5,317,553	2,158,951	15	205,967	9	1,314,199	13
27	14	**Imperial Corp. of America** (San Diego)	5,271,257	549,170	47	(61,091)	97	217,263	47
28	27	**U.S. Fidelity & Guaranty** (Baltimore)	5,079,268	2,305,973	14	103,920	17	1,399,393	12
29	26	**Gibraltar Financial Corp. of California** (Beverly Hills)	4,846,693	546,422	48	(28,133)	92	116,463	65
30	30	**General Re** (Greenwich, Conn.)	4,741,300	1,497,700	24	203,600	10	1,138,800	15
31	37	**City Federal Savings & Loan Association** (Elizabeth, N.J.)	4,528,450	554,098	46	13,189	51	157,705	56
32	31	**Crum & Forster** (New York)[6]	4,472,718	1,995,614	17	115,531	16	1,048,298	16
33	35	**Alleghany** (New York)	4,402,833	1,349,742	27	62,754	29	356,504	33
34	38	**Paine Webber** (New York)[7]	4,295,112	1,099,814	31	35,266	35	154,569	59
35	33	**American Financial** (Cincinnati)	4,139,376	1,831,771	19	100,450	20	196,978	51
36	36	**Capital Holding** (Louisville)	4,064,345	1,286,139	28	101,624	18	902,887	18
37	•	**Gibraltar Savings Association** (Houston)[7]	3,748,169	410,564	53	(22,735)	88	166,097	53
38	•	**Gulf United** (Jacksonville, Fla.)	3,248,439	1,197,561	30	100,985	19	637,414	26
39	39	**Chubb** (New York)	3,202,808	1,508,637	23	73,080	27	725,719	21
40	41	**Reliance Group Holdings** (New York)	3,090,651	1,672,856	20	32,103	37	110,987	66
41	42	**Financial Federation** (Culver City, Calif.)	3,066,139	324,822	59	627	64	156,467	58
42	•	**Torchmark** (Birmingham, Ala.)[8]	3,036,888	947,822	35	79,448	25	645,953	24
43	40	**SAFECO** (Seattle)	2,992,241	1,488,459	25	78,907	26	908,271	17
44	45	**Western Savings & Loan Association** (Phoenix)[9]	2,619,529	268,589	65	(38,656)	95	51,292	77
45	•	**Combined International** (Northbrook, Ill.)	2,453,217	1,043,895	32	81,759	23	573,796	28
46	44	**American Savings & Loan Assoc. of Florida** (Miami)[7]	2,305,568	287,931	61	(13,161)	81	39,466	86
47	43	**American Savings & Loan Assoc.** (Salt Lake City)	2,282,483	278,696	62	(18,075)	84	62,782	73
48	46	**TRANSOHIO Financial** (Cleveland)	2,175,609	217,282	72	(24,258)	89	60,480	74
49	50	**Guarantee Financial Corp. of Calif.** (Fresno)	2,024,805	228,938	70	(2,731)	67	59,683	75
50	47	**Financial Corp. of Santa Barbara** (Calif.)	2,006,678	245,938	69	(5,141)**	74	46,696	82

•Not on last year's list.
N.A. Not available.

[1] Total assets shown as of December 31, 1982, unless otherwise noted. Only assets of consolidated subsidiaries are included. Holding companies engaged in commercial banking or life insurance are listed here only when assets of these businesses represent less than 80% of the companies' total.

[2] Total revenues during the year, including any consolidated non-financial revenues from manufacturing, retailing, etc., and revenues from discontinued operations when published. All companies on the list must have derived

NET INCOME AS PERCENT OF EQUITY		EMPLOYEES		EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS			
							1972-82 GROWTH RATE		1982		1972-82 AVERAGE	
PERCENT	RANK	NUMBER	RANK	1982 $	1981 $	1972 $	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK
—		1,112	67	(1.72)**	(3.22)	2.17	—		190.06	3	7.48	35
9.3	45	53,100	2	4.72	5.75	2.12	8.33	36	(11.72)	84	8.92	31
11.2	37	41,006	3	6.38	9.33[4]	2.97[4]	7.95	39	(7.31)	82	4.61	47
19.1	11	64,005	1	4.53	4.19	1.29	13.38	19	50.87	32	3.39	50
10.0	44	29,098	5	3.51	4.24	1.55	8.52	34	17.44	55	7.20	37
21.6	9	37,882	4	7.59	5.14	1.87‡	15.04	13	85.11	18	11.24	16
34.3	3	1,889	55	17.02	8.35	2.54	20.95	6	113.61	11	17.84	7
—		6,250	32	(1.86)	(2.16)	2.09‡	—		88.42	17	2.88	52
12.3	29	14,500	12	8.05	6.42	2.19	13.90	17	40.48	37	15.48	11
—		3,279	38	(2.75)	(0.68)**	1.71	—		92.35	15	5.79	40
11.1	39	28,800	6	2.95	3.45	1.30	8.54	33	6.09	72	9.52	25
15.1	23	26,250	7	18.10	19.79	4.78	14.24	15	62.58	24	15.71	10
8.6	50	12,777	16	5.64	5.90	3.38	5.25	43	17.53	54	5.96	39
—		2,326	48	(2.05)	(1.87)	1.58	—		57.28	29	(0.24)	58
16.7	17	10,800	20	3.20	4.18	0.86	14.04	16	1.89	79	17.14	9
16.6	18	23,900	8	6.52	6.33	0.93	21.50	5	22.72	48	8.75	32
7.3	56	19,200	9	2.99	4.27	2.50	1.81	50	22.17	49	10.59	19
19.6	10	13,376	14	4.33	4.31	0.79	18.55	9	(2.42)	81	25.65	2
—		2,042	52	(0.97)	(0.93)	0.48	—		98.65	14	8.15	34
2.5	63	2,487	46	0.50**	N.A.	N.A.	—		—		—	
22.4	8	1,674	60	1.79	1.58	0.66**	10.49	27	156.92	4	31.82	1
4.7	61	4,920	34	1.34	1.87**	2.03	(4.07)	52	26.22	45	(0.50)	61
13.2	27	15,700	11	6.61	6.34	2.13	11.99	24	20.76	50	9.60	24
—		13,000	15	(2.17)	(1.11)	3.37	—		31.66	41	(0.33)	59
11.5	33	3,588	37	1.41	1.26	0.97	3.81	46	14.52	57	8.63	33
15.7	21	9,507	25	9.71	6.90	3.15	11.92	26	30.24	43	5.32	44
—		1,350	62	(4.30)	(2.66)	1.61	—		10.63	64	2.76	54
7.4	55	9,200	26	3.62	5.[illegible]	2.12	5.50	42	18.14	53	12.61	14
—		1,330	64	(2.01)	(3.43)**	0.77	—		132.40	8	2.85	53
17.9	13	2,642	43	4.59	4.12	0.76	19.70	8	60.57	25	9.25	27
8.4	53	2,016	53	1.97	(0.21)	N.A.	—		297.44	1	—	
11.0	41	9,793	23	4.00	6.15	1.81	8.25	37	66.52	22	18.08	6
17.6	15	3,966	36	6.38	6.47	0.99	20.48	7	4.55	74	18.41	5
22.8	7	9,562	24	2.53	1.28	0.76	12.78	20	110.53	12	23.52	4
51.0	1	12,000	19	N.A.	N.A.	N.A.	—		—		—	
11.3	36	8,174	28	3.78	3.40	1.40	10.44	28	64.34	23	5.24	46
—		618	82	(3.20)	N.A.	N.A.	—		—		—	
15.8	20	13,900	13	3.02	3.04	1.68	6.04	41	59.70	26	9.51	26
10.1	43	7,700	29	5.94	8.45	4.14	3.68	48	14.23	58	3.10	51
28.9	4	9,000	27	N.A.	N.A.	N.A.	—		—		—	
0.4	65	654	81	0.15	(7.61)	2.38	(24.15)	55	45.07	34	1.46	55
12.3	30	6,511	31	4.23	3.73	0.82	17.83	10	5.24	73	0.26	57
8.7	49	9,800	22	4.20	5.88	2.67	4.63	45	37.21	39	7.10	38
—		1,201	66	(19.52)	(11.81)	2.49	—		69.98	20	(2.55)	64
14.2	25	12,630	17	2.80	3.71	1.20	8.84	31	22.79	47	9.61	23
—		907	70	(5.08)	(2.99)	N.A.	—		115.77	10	—	
—		1,321	65	(8.35)	(9.72)	1.55	—		—		—	
—		743	77	(6.41)	(5.13)	1.63	—		(11.76)	85	—	
—		915	69	(0.92)	(2.35)**	N.A.	—		27.50	44	—	
—		800	74	(1.25)**	(6.98)	1.12	—		(16.30)	87	(6.89)	65

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more than 50% of their revenues from financial businesses and have a publicly traded stock.

[3] Formed by merger of INA (1981 rank: No. 7) and Connecticut General Life (No. 7 on the 1981 Life Insurance list) on March 31, 1982.

[4] Figure is for Connecticut General.

[5] Company is 82% owned by National Steel (No. 127 on the FORTUNE 500).

[6] Company was acquired by Xerox (No. 38 on the FORTUNE 500) on January 11, 1983.

[7] Figures are for fiscal year ending September 30, 1982.

[8] Name changed from Liberty Holding on July 1, 1982.

[9] Name changed from Western Financial Corp. on December 28, 1982.

THE 100 LARGEST DIVERSIFIED FINANCIAL COMPANIES RANKED BY ASSETS

RANK		COMPANY	ASSETS[1]	REVENUES[2]		NET INCOME		STOCKHOLDERS' EQUITY	
1982	1981		$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK
51	49	**Broadview Financial** (Cleveland)	1,934,240	195,321	76	(25,431)	90	24,037	95
52	•	**United Financial Group** (Houston)	1,858,898	214,900	73	(18,570)	86	47,622	81
53	•	**Biscayne Federal Savings & Loan Assoc.** (Miami)[10]	1,852,078	214,120	74	(31,878)	94	534	100
54	•	**Farmers Group** (Los Angeles)	1,802,661	633,100	42	128,107	13	817,464	19
55	•	**Fidelity Federal Savings & Loan Assoc.** (Glendale, Calif.)	1,739,955	186,121	79	(17,144)	82	76,657	68
56	•	**Southland Financial** (Irving, Tex.)	1,725,459	305,883	60	27,544	40	216,422	48
57	•	**First American Financial of Texas** (Houston)[11]	1,587,194	171,968	82	(17,832)	83	7,819	99
58	•	**Ohio Casualty** (Hamilton, Ohio)	1,573,672	888,803	36	55,740	30	503,598	29
59	•	**Downey Savings & Loan Assoc.** (Costa Mesa, Calif.)	1,571,580	187,412	78	(4,427)	71	32,726	90
60	•	**GEICO** (Washington, D.C.)	1,563,799	816,470	39	48,848	31	344,797	35
61	•	**Alexander & Alexander Services** (New York)	1,456,519	573,254	45	(25,773)‡	91	265,678	42
62	•	**First Columbia Financial** (Englewood, Colo.)	1,446,243	182,856	80	(8,106)	77	41,750	85
63	•	**Mercury Savings** (Huntington Beach, Calif.)	1,357,047	144,482	84	(5,087)	73	19,601	98
64	•	**Orbanco Financial Services** (Portland, Ore.)	1,355,036	211,185	75	8,641	54	96,967	67
65	•	**Freedom Savings & Loan Association** (Tampa)	1,320,368	145,155	83	(7,369)**	76	68,817	69
66	•	**Citizens Savings Financial** (Miami)	1,302,716	176,411	81	1,565	63	27,719	93
67	•	**Sooner Federal Savings & Loan Association** (Tulsa)[10]	1,248,264	131,420	87	(7,278)	75	62,838	72
68	•	**Far West Financial** (Newport Beach, Calif.)	1,142,909	120,505	89	(18,553)	85	46,642	83
69	•	**First Savings Association of Wisconsin** (Milwaukee)	1,141,581	127,990	88	(11,298)	80	43,232	84
70	•	**Old Republic International** (Chicago)	1,123,407	355,047	58	42,729	33	263,385	43
71	•	**American Family** (Columbus, Ga.)	1,104,097	584,623	44	24,718	43	210,681	50
72	•	**Hanover Insurance** (Worcester, Mass.)	1,083,493	605,804	43	34,204	36	302,234	37
73	•	**Colonial Penn Group** (Philadelphia)	1,052,663	1,236,119	29	29,376	39	325,352	36
74	•	**Monarch Capital** (Springfield, Mass.)	1,039,769	251,669	68	22,317	45	275,936	38
75	•	**Buckeye Financial** (Columbus, Ohio)	1,027,106	113,303	90	(8,359)**	78	33,109	88
76	•	**Texas Federal Savings & Loan Association** (Dallas)	1,008,970	87,920	96	(9,830)	79	32,879	89
77	•	**Frank B. Hall & Co.** (Briarcliff Manor, N.Y.)	983,761	364,871	57	24,043	44	165,205	54
78	•	**Inter-Regional Financial Group** (Minneapolis)	982,753	277,740	64	5,797	59	66,659	70
79	•	**Nevada Savings & Loan Association** (Las Vegas)	932,599	93,528	95	5,741	60	56,942	76
80	•	**PennCorp Financial** (Santa Monica, Calif.)[12]	928,563	376,189	56	30,573	38	268,913	41
81	•	**First Western Financial** (Las Vegas)	925,483	84,639	97	(3,561)	68	26,706	94
82	•	**Mission Insurance Group** (Los Angeles)	893,964	427,776	52	45,120	32	237,213	46
83	•	**Bradford National** (New York)	881,306	134,614	85	408	65	51,214	78
84	•	**Liberty** (Greenville, S.C.)	843,709	264,820	67	12,725	53	215,913	49
85	•	**Marsh & McLennan Companies** (New York)	837,265	953,108	34	120,413	15	457,252	30
86	•	**First Lincoln Financial** (Monterey Park, Calif.)	829,218	94,026	94	(4,297)	70	28,681	92
87	•	**Fremont General** (Los Angeles)	824,336	457,767	50	6,678	58	126,975	62
88	•	**Beverly Hills Savings & Loan Assoc.** (Mission Viejo, Calif.)	821,755	108,286	91	2,423**	61	21,828	97
89	•	**United States Leasing International** (San Francisco)	801,090	267,096	66	21,773	46	178,019	52
90	•	**First City Federal Savings & Loan Assoc.** (Bradenton, Fla.)[7]	795,342	69,172	100	(3,943)	69	23,173	96
91	•	**Lomas & Nettleton Financial** (Dallas)[10]	792,912	133,876	86	20,915	48	117,578	64
92	•	**Naples Federal Savings & Loan Assoc.** (Naples, Fla.)[7]	783,718	94,564	93	1,701	62	49,363	80
93	•	**Citizens Savings Association** (Canton, Ohio)[7]	782,303	83,010	98	(4,588)	72	38,883	87
94	•	**Western Casualty & Surety** (Fort Scott, Kans.)	726,835	396,298	54	21,018	47	244,308	45
95	•	**Cincinnati Financial**	720,138	390,652	55	42,502	34	244,818	44
96	•	**Prudential Federal Savings & Loan Assoc.** (Salt Lake City)	706,636	75,506	99	(1,953)	66	50,994	79
97	•	**Homestead Financial** (Burlingame, Calif.)	649,227	96,939	92	7,302	56	29,625	91
98	•	**Beneficial Standard** (Los Angeles)	628,742	218,245	71	7,927	55	136,556	61
99	•	**Discount Corp. of New York**	615,364	194,037	77	25,601	42	65,945	71
100	•	**Orion Capital** (New York)	609,926	278,307	63	12,745	52	148,335	60
		TOTALS	551,339,196	137,720,573		5,256,998		52,707,549	

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[10] Figures are for fiscal year ending June 30, 1982.

[11] Company merged into United Financial Group on April 29, 1983.

[12] Company merged into Associated Madison Companies, a wholly owned subsidiary of American Can (No. 89 on the FORTUNE 500), on January 11, 1983.

NET INCOME AS PERCENT OF EQUITY		EMPLOYEES		EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS			
							1972-82 GROWTH RATE		1982		1972-82 AVERAGE	
PERCENT	RANK	NUMBER	RANK	1982$	1981 $	1972 $	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK
—		689	80	(8.55)	(6.41)	N.A.	—		9.75	66	—	
—		580	84	(3.14)	N.A.	N.A.	—		41.32	35	—	
—		587	83	(17.00)	(3.67)	N.A.	—		(1.50)	80	—	
15.7	22	12,140	18	3.77	3.53	0.83	16.34	12	14.04	59	7.28	36
—		810	73	N.A.	N.A.	N.A.	—		—		—	
12.7	28	3,259	39	1.55	1.94	0.63	9.42	29	(8.54)	83	5.28	45
—		565	85	(6.37)	(1.40)	N.A.	—		—		—	
11.1	40	5,303	33	4.80	6.58	2.36	7.36	40	8.02	68	9.03	29
—		706	79	(0.94)	(3.89)	0.32	—		88.93	16	9.96	21
14.2	26	4,626	35	2.39	4.02	1.88	2.43	49	56.96	31	(0.34)	60
—		10,400	21	(1.03)‡	2.98	0.69	—		7.11	70	8.93	30
—		870	72	(3.42)	N.A.	N.A.	—		—		—	
—		782	76	(1.23)	(1.92)	0.43	—		57.45	28	—	
8.9	47	1,736	58	2.93	4.51	1.36	7.98	38	(28.50)	89	0.46	56
—		713	78	(2.78)**	(2.15)	N.A.	—		135.14	6	—	
5.6	59	797	75	2.12	(0.77)	N.A.	—		—		—	
—		345	94	(2.22)	N.A.	N.A.	—		57.14	30	—	
—		470	87	(9.24)	(1.94)‡	0.99	—		10.79	63	(2.46)	63
—		500	86	(9.04)	N.A.	N.A.	—		6.45	71	—	
16.2	19	2,392	47	4.10	4.00	1.16	13.46	18	32.77	40	5.71	42
11.7	32	1,855	56	1.58	1.13	0.67	8.96	30	107.88	13	14.71	12
11.3	35	2,700	42	6.69	8.89	2.13	12.13	23	7.20	69	9.95	22
9.0	46	2,900	41	1.82	(1.45)	1.15	4.70	44	19.31	52	(8.77)	67
8.1	54	1,789	57	2.55	3.06	1.10	8.77	32	11.43	62	9.24	28
—		402	91	(4.62)**	(3.67)	N.A.	—		46.00	33	—	
—		470	88	(6.55)	N.A.	N.A.	—		12.77	61	—	
14.6	24	7,000	30	2.07	2.65	0.92	8.45	35	1.89	78	5.55	43
8.7	48	2,490	45	0.96	2.29	1.53	(4.55)	53	26.14	46	—	
10.1	42	425	89	1.25	1.02	0.39	12.35	21	57.77	27	—	
11.4	34	1,900	54	N.A.	N.A.	N.A.	—		134.05	7	4.54	48
—		327	96	(0.84)	0.25	0.18**	—		2.23	77	—	
19.0	12	2,207	50	3.78	2.71	0.42	24.57	3	20.28	51	14.41	13
0.8	64	3,100	40	0.10	(2.52)	0.55	(15.67)	54	122.26	9	(7.64)	66
5.9	57	2,628	44	1.05	1.06	0.96	0.90	51	2.36	76	5.78	41
26.3	5	18,574	10	3.36	3.27	0.88	14.34	14	31.36	42	10.33	20
—		409	90	(1.79)	(5.48)	0.60**	—		10.17	65	(1.42)	62
5.3	60	1,735	59	0.64	2.30	N.A.	—		(21.46)	88	—	
11.1	38	300	97	2.02**	(12.18)	N.A.	—		9.09	67	—	
12.2	31	1,350	63	3.52	2.24	1.14	11.93	25	41.27	36	3.89	49
—		335	95	(4.71)	(1.18)	N.A.	—		216.67	2	—	
17.8	14	2,103	51	3.02	2.84	0.96	12.14	22	139.81	5	12.15	15
3.4	62	349	93	0.77	1.83	N.A.	—		68.16	21	—	
—		285	98	(12.29)	3.10	N.A.	—		—		—	
8.6	51	2,251	49	5.26	6.93	3.66	3.69	47	13.40	60	10.63	18
17.4	16	1,100	68	6.11	5.64	1.32	16.56	11	37.95	38	10.67	17
—		99	100	(0.77)	0.40**	N.A.	—		(11.76)	86	—	
25.3	6	360	92	2.02	0.19	0.10	35.06	2	—		—	
5.8	58	875	71	1.37	2.86	0.06‡	36.73	1	3.71	75	17.62	8
38.8	2	176	99	25.60	8.60	3.62	21.61	4	79.17	19	24.78	3
8.6	52	1,480	61	1.88	3.76	N.A.	—		15.17	56	—	
		679,445										

THE 50 LARGEST LIFE INSURANCE COMPANIES RANKED BY ASSETS

RANK		COMPANY	ASSETS[1]	PREMIUM AND ANNUITY INCOME[2]		NET INVESTMENT INCOME	
1982	1981		$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK
1	1	**Prudential** (Newark)*	66,707,209	9,697,838	1	3,818,374	2
2	2	**Metropolitan** (New York)*	55,731,371	5,338,494	2	4,342,574	1
3	3	**Equitable Life Assurance** (New York)*	40,285,559	2,111,770	8	2,387,884	3
4	4	**Aetna Life** (Hartford)[7]	28,551,098	4,649,028	4	1,565,681	5
5	5	**New York Life***	22,549,386	3,069,838	6	1,642,834	4
6	6	**John Hancock Mutual** (Boston)*	21,710,494	2,532,923	7	1,387,103	7
7	8	**Travelers** (Hartford)[8]	17,440,305	5,098,802	3	1,413,808	6
8	7	**Connecticut General Life** (Bloomfield)[9]	15,660,054	3,609,420	5	1,091,955	9
9	10	**Teachers Insurance & Annuity** (New York)	13,519,897	1,296,071	14	1,267,362	8
10	9	**Northwestern Mutual** (Milwaukee)*	13,252,835	1,396,643	10	920,976	10
11	11	**Massachusetts Mutual** (Springfield)*	11,151,921	1,388,135	11	770,071	12
12	12	**Bankers Life** (Des Moines)*	9,959,128	1,822,641	9	771,679	11
13	13	**Mutual of New York**	8,754,377	894,902	20	613,129	13
14	14	**New England Mutual** (Boston)	7,968,698	1,340,138	12	582,965	14
15	15	**Mutual Benefit** (Newark)*	7,266,134	1,054,030	18	537,974	15
16	16	**Connecticut Mutual** (Hartford)*	6,321,229	687,545	24	443,505	16
17	17	**Lincoln National Life** (Fort Wayne, Ind.)[10]	4,914,285	857,399	21	340,874	17
18	19	**State Farm Life** (Bloomington, Ill.)	4,293,366	637,066	27	334,517	18
19	18	**Penn Mutual** (Philadelphia)*	4,011,189	434,429	35	260,992	19
20	21	**Continental Assurance** (Chicago)[11]	3,698,508	1,087,342	17	163,547	38
21	20	**Phoenix Mutual** (Hartford)*	3,533,914	605,615	28	245,173	20
22	22	**Western & Southern** (Cincinnati)*	3,374,465	299,101	44	224,562	24
23	25	**Nationwide Life** (Columbus, Ohio)	3,364,374	599,763	30	157,867	41
24	24	**Pacific Mutual** (Newport Beach, Calif.)*	3,213,128	656,411	25	220,587	26
25	23	**National Life & Accident** (Nashville)[12]	3,147,599	423,334	36	243,151	21
26	•	**National Investors Pension** (Little Rock)[13]	2,915,210	1,288,769	15	221,328	25
27	30	**American National** (Galveston, Tex.)	2,741,559	403,532	39	187,265	32
28	29	**State Mutual of America** (Worcester, Mass.)	2,738,823	500,783	32	201,678	30
29	28	**Franklin Life** (Springfield, Ill.)[14]	2,665,131	285,172	46	202,314	29
30	27	**National Life** (Montpelier, Vt.)*	2,656,918	209,078	48	175,012	34
31	32	**IDS Life** (Minneapolis)[15]	2,652,192	655,063	26	219,900	27
32	26	**Transamerica Occidental Life** (Los Angeles)[16]	2,640,648	1,090,381	16	162,558	40
33	35	**Variable Annuity Life** (Houston)[12]	2,638,887	459,246	34	226,075	23
34	34	**Aetna Life & Annuity** (Hartford)[7]	2,594,751	489,939	33	126,241	48
35	31	**Union Mutual** (Portland, Me.)	2,442,307	506,267	31	204,787	28
36	•	**Executive Life** (Beverly Hills)	2,394,251	947,240	19	235,098	22
37	41	**General American Life** (St. Louis)*	2,234,621	714,444	23	162,743	39
38	39	**Minnesota Mutual Life** (St. Paul)	2,234,063	411,611	38	148,807	42
39	33	**Guardian of America** (New York)*	2,225,080	603,917	29	181,338	33
40	40	**United of Omaha Life** (Omaha)	2,198,378	344,390	43	172,879	35
41	36	**Provident Mutual** (Philadelphia)*	2,123,775	248,590	47	144,596	43
42	37	**Home Life** (New York)*	2,077,561	349,201	42	142,358	44
43	38	**Provident Life & Accident** (Chattanooga)	2,037,246	822,276	22	134,773	46
44	43	**Northwestern National** (Minneapolis)	1,865,762	412,947	37	112,767	49
45	42	**Southwestern Life** (Dallas)[17]	1,818,761	208,673	49	131,687	47
46	44	**Liberty National** (Birmingham, Ala.)[18]	1,752,605	297,420	45	90,255	50
47	•	**Charter Security Life** (Chatham, N.J.)[19]	1,752,039	1,319,894	13	199,401	31
48	48	**American United Life** (Indianapolis)*	1,728,673	358,281	40	134,809	45
49	45	**Anchor National** (Los Angeles)	1,669,586	198,273	50	165,337	37
50	•	**Kemper Investors Life** (Chicago)[20]	1,667,808	353,852	41	168,837	36
		TOTALS	436,847,158	65,067,917		30,001,987	

Data for all companies are on the statutory accounting basis required by state insurance regulatory authorities.

•Not on last year's list.

* Indicates a mutual company.

N.A. Not available.

[1] As of December 31, 1982.

[2] Includes premium income from life, accident, and health policies, annuities, and from contributions to deposit administration funds.

[3] After dividends to policyholders and federal income taxes, excluding capital gains and losses. Figures in parentheses indicate a loss.

[4] Face value of all life policies as of December 31, 1982.

[5] Change between December 31, 1981, and December 31, 1982.

[6] Includes home office, field force, and full-time agents.

[7] Wholly owned by Aetna Life & Casualty (No. 2 on Diversified Financial list).

[8] Wholly owned by Travelers Corp. (No. 5 on Diversified Financial list).

NET GAIN FROM OPERATIONS[3]			LIFE INSURANCE IN FORCE[4]		INCREASE IN LIFE INSURANCE IN FORCE[5]				EMPLOYEES[6]	
	RANK									
$ THOUSANDS	MUTUAL	STOCK	$ THOUSANDS	RANK	$ THOUSANDS	RANK	PERCENT	RANK	NUMBER	RANK
269,815	2		482,307,989	1	26,133,359	2	5.7	33	61,132	1
308,872	1		426,628,778	2	33,038,052	1	8.4	23	42,000	3
(60,492)	25		228,347,520	3	4,472,844	18	2.0	42	15,800	8
341,342		1	180,143,526	4	16,269,673	6	9.9	20	17,169	6
106,570	5		151,075,132	5	13,618,738	7	9.9	21	18,952	5
136,309	3		147,002,479	6	1,393,275	32	1.0	45	20,216	4
190,113		3	137,855,105	8	21,356,889	4	18.3	8	42,262	2
218,587		2	96,664,084	9	5,855,031	14	6.4	30	11,099	10
5,499		22	10,901,716	42	1,829,318	26	20.2	6	2,057	41
58,677	7		79,340,719	11	9,206,978	8	13.1	14	7,054	17
120,508	4		57,499,274	13	1,520,469	29	2.7	40	8,283	11
29,608	10		47,180,003	16	4,499,105	17	10.5	17	6,821	18
65,752	6		45,791,470	17	2,963,582	21	6.9	26	7,417	15
18,255	15		36,313,315	20	1,321,680	33	3.8	39	8,218	12
18,856	13		51,174,592	14	4,442,207	19	9.5	22	5,917	21
47,924	8		35,216,078	21	5,662,523	15	19.2	7	5,486	22
101,287		5	91,524,863	10	18,897,234	5	26.0	4	4,642	23
80,496		6	64,516,764	12	6,037,212	13	10.3	18	16,841	7
22,773	11		20,998,448	27	1,590,588	28	8.2	24	4,197	25
24,804		13	30,423,106	25	1,618,239	27	5.6	34	N.A.	
13,425	19		42,040,200	18	8,690,261	9	25.9	5	3,454	30
42,287	9		16,801,945	35	1,519,536	30	9.9	19	7,586	14
14,792		17	15,135,175	36	221,309	44	1.5	44	6,246	19
7,446	23		19,514,645	30	418,399	43	2.2	41	2,741	34
108,436		4	20,423,664	28	2,586,717	23	14.5	12	7,317	16
(112,120)		25	—	50	—	47	—	—	—	49
54,898		8	20,049,450	29	2,533,070	24	14.5	13	7,612	13
13,938	18		17,955,794	32	1,142,547	36	6.8	27	2,819	33
72,437		7	17,722,702	33	1,303,292	35	7.9	25	3,183	32
8,403	21		11,378,275	41	81,890	46	0.7	46	2,351	39
23,352		14	12,863,995	38	1,311,812	34	11.4	16	4,220	24
7,548		21	145,633,397	7	22,009,093	3	17.8	9	6,073	20
(3,302)		24	5,114	49	(890)	48			434	44
18,831		16	9,146,932	44	5,633,489	16	160.3	2	3,616	29
18,332	14		6,547,371	46	831,040	37	14.5	11	2,694	36
2,322		23	9,359,879	43	6,263,271	12	202.3	1	375	46
11,775	20		32,745,542	23	3,620,270	20	12.4	15	2,683	37
17,429	17		49,841,534	15	6,360,464	11	14.6	10	3,233	31
18,109	16		29,788,750	26	8,525,713	10	40.1	3	3,662	28
22,210		15	34,474,162	22	1,994,460	25	6.1	32	12,525	9
22,714	12		13,474,928	37	654,223	42	5.1	35	2,208	40
6,030	24		17,094,173	34	702,387	40	4.3	38	2,721	35
54,785		9	41,036,418	19	2,586,992	22	6.7	29	4,105	26
25,821		11	31,051,370	24	1,430,863	31	4.8	36	2,642	38
42,868		10	11,440,195	40	679,563	41	6.3	31	1,739	42
25,432		12	12,527,468	39	791,768	39	6.7	28	4,092	27
12,067		19	187,073	48	(1,224,694)	50			250	47
7,957	22		18,661,511	31	811,945	38	4.5	37	1,186	43
13,261		18	7,401,122	45	128,915	45	1.8	43	419	45
10,951		20	199,051	47	(48,208)	49			200	48
2,687,989			3,085,456,796		263,286,493				407,947	

[9] Wholly owned by CIGNA (No. 3 on Diversified Financial list).

[10] Wholly owned by Lincoln National (No. 13 on Diversified Financial list).

[11] Wholly owned by a subsidiary of Loews (No. 12 on Diversified Financial list).

[12] Wholly owned by American General (No. 9 on Diversified Financial list).

[13] Wholly owned by Baldwin-United (No. 15 on Diversified Financial list).

[14] Wholly owned by American Brands (No. 90 on the FORTUNE 500).

[15] Wholly owned by Allegheny (No. 33 on Diversified Financial list).

[16] Wholly owned by Transamerica (No. 11 on Diversified Financial list).

[17] Wholly owned by Tenneco (No. 19 on the FORTUNE 500).

[18] Wholly owned by Torchmark (No. 42 on Diversified Financial list).

[19] Wholly owned by Charter (No. 88 on the FORTUNE 500).

[20] Wholly owned by Kemper (No. 23 on Diversified Financial list).

THE 50 LARGEST RETAILING COMPANIES RANKED BY SALES

RANK		COMPANY	SALES[1]	ASSETS		NET INCOME		STOCKHOLDERS' EQUITY	
1982	1981		$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK
1	1	**Sears Roebuck** (Chicago)[2]	**30,019,800**	**36,643,100**	1	**861,200**	1	**8,812,400**	1
2	2	**Safeway Stores** (Oakland, Calif.)[2]	**17,632,821**	**3,890,633**	7	**159,660**	9	**1,137,095**	9
3	3	**K mart** (Troy, Mich.)	**16,772,166**	**7,343,665**	3	**261,823**	4	**2,601,272**	3
4	5	**Kroger** (Cincinnati)[2]	**11,901,892**	**2,729,559**	11	**143,758**	10	**871,053**	13
5	4	**J.C. Penney** (New York)	**11,413,806**	**6,682,000**	4	**391,687**	2	**3,227,503**	2
6	7	**Lucky Stores** (Dublin, Calif.)	**7,972,973**	**1,609,127**	21	**92,226**	19	**526,400**	23
7	•	**Household International** (Prospect Heights, Ill.)[2,3]	**7,767,500**	**8,235,100**	2	**125,400**	14	**1,331,900**	8
8	9	**Federated Department Stores** (Cincinnati)	**7,698,944**	**4,574,288**	5	**232,776**	5	**2,105,146**	4
9	8	**American Stores** (Salt Lake City)	**7,507,772**	**1,444,367**	24	**90,371**	21	**357,455**	30
10	11	**Winn-Dixie Stores** (Jacksonville, Fla.)[5]	**6,764,472**	**1,039,600**	31	**103,513**	17	**514,618**	25
11	13	**Southland** (Dallas)[2]	**6,756,933**	**1,842,584**	18	**108,051**	16	**703,348**	18
12	6	**F.W. Woolworth** (New York)	**6,590,000**	**2,489,000**	13	**(353,000)**	50	**999,000**	12
13	10	**Great Atlantic & Pacific Tea** (Montvale, N.J.)[6]	**6,226,755**	**1,141,679**	29	**(101,633)****	48	**302,153**	34
14	16	**Dayton Hudson** (Minneapolis)	**5,660,729**	**2,984,147**	10	**206,716**	8	**1,348,763**	7
15	12	**Montgomery Ward** (Chicago)[2,7]	**5,583,861**	**4,047,960**	6	**(74,611)**	47	**1,603,232**	5
16	14	**Jewel Companies** (Chicago)	**5,571,721**	**1,474,805**	23	**88,109**	22	**576,239**	21
17	•	**BATUS** (Louisville)[2,8,9]	**5,165,439**	**3,745,279**	8	**213,955**	7	**1,050,928**	10
18	17	**Grand Union** (Elmwood Park, N.J.)[10]	**4,137,447**	**756,248**	35	**24,652**	41	**211,734**	40
19	18	**Albertson's** (Boise)	**3,940,117**	**831,079**	33	**58,375**	28	**340,348**	31
20	19	**May Department Stores** (St. Louis)	**3,670,371**	**2,625,173**	12	**141,656**	12	**1,033,096**	11
21	30	**Wal-Mart Stores** (Bentonville, Ark.)	**3,447,743**	**1,187,448**	28	**124,140**	15	**488,109**	27
22	24	**Melville** (Harrison, N.Y.)[2]	**3,261,649**	**1,246,614**	25	**142,124**	11	**701,425**	19
23	20	**Supermarkets General** (Woodbridge, N.J.)	**3,247,338**	**691,761**	38	**37,693**	36	**206,191**	42
24	23	**Allied Stores** (New York)	**3,215,634**	**2,283,252**	14	**90,659**	20	**867,844**	14
25	25	**Associated Dry Goods** (New York)	**3,188,858**	**1,700,684**	19	**78,414**	23	**750,696**	17
26	22	**Carter Hawley Hale Stores** (Los Angeles)	**3,054,764**	**1,890,842**	17	**49,025**	32	**692,972**	20
27	26	**R.H. Macy** (New York)[11]	**2,979,391**	**1,619,135**	20	**135,571**	13	**785,925**	16
28	27	**Dillon Companies** (Hutchinson, Kans.)[5,12]	**2,823,674**	**558,201**	45	**50,582**	30	**208,560**	41
29	21	**ARA Services** (Philadelphia)[13]	**2,805,633**	**1,205,787**	27	**43,843****	35	**508,919**	26
30	28	**McDonald's** (Oak Brook, Ill.)[2]	**2,715,218**	**3,262,811**	9	**300,644**	3	**1,528,560**	6
31	•	**Wickes Companies** (Santa Monica, Calif.)	**2,638,215**	**1,898,605**	16	**(248,682)**	49	**(230,206)**	50
32	32	**Marriott** (Bethesda, Md.)[2]	**2,541,353**	**2,062,648**	15	**94,342**	18	**516,005**	24
33	•	**Publix Super Markets** (Lakeland, Fla.)[2]	**2,506,852**	**481,450**	47	**46,788**	33	**293,082**	37
34	29	**Rapid-American** (New York)	**2,401,085**	**1,591,701**	22	**46,499****	34	**60,349**	48
35	31	**Stop & Shop Companies** (Boston)	**2,341,900**	**617,665**	41	**34,823**	38	**181,455**	45
36	34	**Zayre** (Framingham, Mass.)	**2,139,616**	**747,649**	37	**35,176**	37	**294,762**	36
37	35	**Jack Eckerd** (Clearwater, Fla.)[11]	**2,080,183**	**754,377**	36	**70,681**	24	**529,742**	22
38	36	**Walgreen** (Deerfield, Ill.)[14]	**2,039,496**	**616,434**	42	**56,064**	29	**299,189**	35
39	37	**Tandy** (Fort. Worth)[5]	**2,032,555**	**1,227,644**	26	**224,085**	6	**812,677**	15
40	33	**Sigmor** (San Antonio)[5,15]	**1,888,215**	**632,037**	39	**(16,432)**	45	**188,631**	44
41	39	**Giant Food** (Landover, Md.)[6]	**1,683,881**	**392,246**	48	**16,769**	43	**132,810**	46
42	•	**Best Products** (Richmond, Va.)	**1,581,650**	**1,058,596**	30	**28,820**	40	**321,695**	33
43	41	**Revco D.S** (Twinsburg, Ohio)[16]	**1,554,656**	**500,884**	46	**49,638**	31	**285,143**	38
44	40	**Waldbaum** (Central Islip, N.Y.)[2]	**1,491,363**	**273,134**	49	**16,825**	42	**101,471**	47
45	42	**Mercantile Stores** (Wilmington)	**1,428,385**	**780,277**	34	**69,941**	25	**458,123**	28
46	•	**Brown Group** (St. Louis)[17,18]	**1,396,531**	**621,571**	40	**59,590**	27	**364,457**	29
47	•	**Evans Products** (Portland, Ore.)[2,19]	**1,268,093**	**948,780**	32	**(64,821)**	46	**218,755**	39
48	47	**U.S. Shoe** (Cincinnati)	**1,254,138**	**590,407**	43	**60,116**	26	**329,040**	32
49	43	**First National Supermarkets** (Maple Heights, Ohio)[10]	**1,201,258**	**200,894**	50	**(4,480)**	44	**36,787**	49
50	50	**Service Merchandise** (Nashville)[2]	**1,195,283**	**585,508**	44	**31,569**	39	**205,332**	43
		TOTALS	**246,160,129**	**128,358,435**		**4,434,691**		**41,792,183**	

•Not on last year's list.

N.A. Not available.

[1] Net sales include operating revenues from non-retail activities and revenues from discontinued operations when they are published. All figures are for the fiscal year ending January 31, 1983, unless otherwise noted. Sales of subsidiaries are included when they are consolidated. All companies on the list must have derived more than 50% of their revenues from retail operations.

[2] Figures are for fiscal year ending December 31, 1982.

[3] Figures include those of Household Merchandising (1981 rank: 15) and Household Manufacturing (No. 353 on the FORTUNE 500).

[4] Figure is for Skaggs.

[5] Figures are for fiscal year ending June 30, 1982.

[6] Figures are for fiscal year ending February 27, 1982.

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS				
		SALES		STOCKHOLDERS' EQUITY					1972-82 GROWTH RATE		1982		1972-82 AVERAGE	
NUMBER	RANK	PERCENT	RANK	PERCENT	RANK	1982 $	1981 $	1972 $	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK
403,600	1	2.9	17	9.8	39	2.46	2.06	1.99	2.14	37	95.29	16	(1.70)	37
156,478	4	0.9	42	14.0	28	6.11	4.39	3.55	5.58	34	82.63	20	6.56	28
240,000	2	1.6	32	10.1	38	2.06	1.75	1.00	7.49	30	45.95	33	(5.21)	41
131,962	6	1.2	36	16.5	20	4.84	4.51	0.69‡	21.51	9	58.22	28	20.67	8
173,000	3	3.4	13	12.1	32	5.35	5.50	2.86	6.46	33	75.86	22	(1.95)	38
64,000	16	1.2	39	17.5	15	1.80	1.88	0.81	8.31	29	42.16	34	8.60	25
84,000	11	1.6	27	9.4	40	2.06	2.66	2.42	(1.60)	38	61.65	27	2.94	32
124,600†	7	3.0	16	11.1	35	4.79	5.33	2.46	6.89	32	36.95	39	2.71	34
62,449	19	1.2	37	25.3	4	8.07	5.42	0.62[4]	29.26	4	123.56	10	19.59	11
64,500	15	1.5	33	20.1	8	4.18	3.67	1.49	10.87	22	53.58	30	8.62	24
49,900†	23	1.6	29	15.4	24	3.02	2.65	0.69	15.91	17	25.69	40	7.47	26
103,600	10	—		—		(11.71)	2.64	2.60	—		53.78	29	5.40	30
45,000	26	—		—		(2.72)**	(1.35)	0.59	—		113.00	11	(5.80)	42
80,000†	13	3.7	11	15.3	25	4.29	3.62	0.85	17.57	14	87.50	19	19.93	10
83,100†	12	—		—		N.A.	N.A.	N.A.	—		—		—	
37,500	28	1.6	30	15.3	26	6.82	8.03	2.67	9.83	27	38.41	38	9.38	22
64,000	17	4.1	8	20.4	6	N.A.	N.A.	N.A.	—		—		—	
32,000	31	0.6	43	11.6	34	N.A.	N.A.	N.A.	—		—		—	
32,000	30	1.5	35	17.2	18	3.81	3.14	0.59	20.51	10	81.96	21	23.67	5
69,300	14	3.9	9	13.7	29	4.87	4.31	2.09	8.83	28	95.64	15	8.92	23
46,000	25	3.6	12	25.4	3	1.82	1.25	0.09	35.08	2	135.49	7	28.53	2
61,844	20	4.4	6	20.3	7	5.46	5.26	1.18	16.56	15	92.82	17	12.38	19
31,000	32	1.2	38	18.3	13	4.38	3.61	0.49	24.49	6	98.13	14	15.56	17
63,000	18	2.8	18	10.4	36	4.41	4.38	1.64	10.40	24	52.82	31	13.42	18
61,000	21	2.5	21	10.4	37	4.31	4.17	3.16	3.15	35	89.40	18	4.38	31
56,000	22	1.6	28	7.1	43	1.55	1.55	1.87	(1.86)	39	12.26	42	(4.22)	39
49,000†	24	4.6	5	17.2	17	4.11	3.68	0.92	16.15	16	133.85	9	19.47	12
24,700	41	1.8	25	24.3	5	2.76	2.28	0.47	19.37	12	63.10	26	17.06	16
115,000	8	1.6	31	8.6	42	3.86**	4.70**	3.02	2.48	36	40.47	35	(6.24)	43
140,000	5	11.1	1	19.7	9	5.00	4.36	0.63	23.02	8	40.35	36	2.41	35
28,000	38	—		—		(17.12)	(17.47)	1.42	—		(57.63)	45	(11.12)	44
109,200	9	3.7	10	18.3	12	3.46	3.21	0.55	20.19	11	63.93	25	6.52	29
30,137	36	1.9	23	16.0	22	9.43	7.68	N.A.	—		—		—	
40,000	27	1.9	22	77.1	1	N.A.	2.03	2.36‡	—		—		—	
29,000	37	1.5	34	19.2	10	6.87	6.06	1.62	15.54	19	152.83	4	21.84	6
34,000	29	1.6	26	11.9	33	4.74	3.38	1.79	10.23	25	157.77	3	10.89	20
30,600	35	3.4	14	13.3	30	1.90	2.19	0.73	10.04	26	4.84	43	1.08	36
31,000	33	2.7	19	18.7	11	3.73	2.91	0.89	15.41	20	135.15	8	24.30	4
31,000	34	11.0	2	27.6	2	2.17	1.65	0.09	37.47	1	50.37	32	36.65	1
4,600	50	—		—		(0.96)	1.90	0.41	—		14.74	41	19.30	13
14,400	44	1.0	41	12.6	31	3.41	3.74	1.69	7.27	31	167.70	2	20.48	9
12,800	47	1.8	24	9.0	41	2.45	2.50	0.25	25.64	5	38.74	37	2.82	33
20,800	42	3.2	15	17.4	16	2.42	2.21	0.47	17.81	13	71.28	23	10.78	21
6,500	49	1.1	40	16.6	19	6.29	3.86	0.74	23.86	7	136.69	6	18.16	14
19,000	43	4.9	3	15.3	27	11.86	9.82	3.52	12.92	21	110.73	12	6.87	27
28,000	39	4.3	7	16.4	21	5.55	5.05	2.00	10.75	23	103.56	13	17.47	15
13,000	45	—		—		(5.64)	1.03	1.71	—		(50.71)	44	(4.43)	40
25,000	40	4.8	4	18.3	14	5.43	5.33	1.25	15.82	18	68.33	24	20.69	7
13,000	46	—		—		(1.39)	2.52**	N.A.	—		222.42	1	—	
9,963†	48	2.6	20	15.4	23	2.40	1.82	0.12	34.93	3	139.79	5	26.14	3
3,278,533														

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[7] Company is wholly owned by Mobil (No. 3 on the FORTUNE 500).

[8] Company is wholly owned by BAT Industries (No. 24 among the 1981 Largest Industrial Corporations Outside the U.S.).

[9] Company was No. 90 on the 1981 FORTUNE 500.

[10] Figures are for fiscal year ending March 31, 1982.

[11] Figures are for fiscal year ending July 31, 1982.

[12] Company was acquired by Kroger (rank: No. 4) on January 25, 1983.

[13] Figures are for fiscal year ending October 1, 1982.

[14] Figures are for fiscal year ending August 31, 1982.

[15] Company was acquired by Diamond Shamrock (No. 121 on the FORTUNE 500) on January 14, 1983.

[16] Figures are for fiscal year ending May 29, 1982.

[17] Company was No. 263 on the 1981 FORTUNE 500.

[18] Figures are for fiscal year ending October 30, 1982.

[19] Company was No. 243 on the 1981 FORTUNE 500.

THE 50 LARGEST TRANSPORTATION COMPANIES RANKED BY OPERATING REVENUES

RANK 1982	 1981	COMPANY	OPERATING REVENUES[1] $ THOUSANDS	ASSETS $ THOUSANDS	 RANK	NET INCOME[2] $ THOUSANDS	 RANK	STOCKHOLDERS' EQUITY $ THOUSANDS	 RANK
1	3	**UAL** (Elk Grove, Ill.)	5,319,709	4,578,894	6	30,762**	20	1,115,550	6
2	5	**United Parcel Service** (Greenwich, Conn.)	5,213,226	2,054,436	16	331,866	4	1,107,831	7
3	2	**Trans World** (New York)	5,107,863	3,535,520	8	29,925	22	843,292	10
4	1	**CSX** (Richmond, Va.)	4,908,600	8,109,100	1	338,400	3	3,398,200	2
5	4	**Burlington Northern** (Seattle)	4,197,599	5,797,265	3	283,736	6	2,836,382	3
6	6	**AMR** (Fort Worth)[4]	4,176,974	3,896,813	7	(19,613)	43	836,155	11
7	8	**Eastern Air Lines** (Miami)	3,769,237	3,224,887	9	(74,927)	47	255,274	28
8	7	**Pan American World Airways** (New York)	3,716,025	2,696,152	11	(485,331)	50	336,749	22
9	9	**Delta Air Lines** (Atlanta)[5]	3,617,523	2,657,880	12	20,814	26	1,023,651	8
10	14	**Norfolk Southern** (Norfolk, Va.)[6]	3,358,996	6,803,415	2	411,368	1	3,481,025	1
11	10	**Santa Fe Industries** (Chicago)	3,159,600	4,732,300	5	180,200	9	2,480,500	4
12	11	**Southern Pacific** (San Francisco)	3,105,800	5,512,200	4	120,100	10	2,354,270	5
13	13	**Northwest Airlines** (St. Paul)	1,877,568	1,377,387	19	5,019	35	820,605	12
14	16	**Tiger International** (Los Angeles)	1,555,428	2,460,619	14	(136,223)	48	283,166	25
15	17	**Republic Airlines** (Minneapolis)	1,530,668	1,186,174	22	(39,861)	44	27,938	45
16	31	**Texas Air** (Houston)[9]	1,516,320	1,191,976	21	(48,975)	46	63,477	42
17	18	**Sohio Pipe Line** (Cleveland)[10]	1,298,675	3,143,714	10	344,055	2	9,341	49
18	22	**USAir** (Washington, D.C.)	1,273,012	1,062,250	23	59,104	15	459,118	17
19	20	**Consolidated Freightways** (Palo Alto)	1,203,796	899,442	26	54,789	16	498,538	15
20	21	**Roadway Services** (Akron)[11]	1,146,562	686,491	33	76,152	12	454,843	18
21	27	**Leaseway Transportation** (Beachwood, Ohio)	1,066,196	861,146	27	26,428	24	270,292	26
22	24	**Western Air Lines** (Los Angeles)	1,065,270	808,636	28	(44,016)	45	77,645	39
23	28	**Yellow Freight System** (Overland Park, Kans.)	936,041	471,103	39	10,664	29	212,630	31
24	25	**Illinois Central Gulf Railroad** (Chicago)[12]	925,775	1,971,970	17	(9,949)**	39	958,519	9
25	30	**ARCO Pipe Line** (Independence, Kans.)[13]	873,120	2,206,398	15	268,035	7	496,287	16
26	29	**Exxon Pipeline** (Houston)[14]	821,955	2,565,811	13	292,662	5	648,110	13
27	36	**Federal Express** (Memphis)[15]	803,915	730,291	31	78,385	11	350,319	21
28	26	**Chicago & North Western Transportation** (Chicago)	803,812	918,942	25	(19,088)	42	152,929	35
29	*	**Purolator** (Piscataway, N.J.)	752,802	331,945	42	28,646	23	137,277	36
30	32	**Piedmont Aviation** (Winston-Salem)	712,987	805,311	29	30,463	21	254,373	29
31	35	**Emery Air Freight** (Wilton, Conn.)	581,702	282,681	42	10,206	30	75,500	40
32	33	**BP Pipelines** (New York)[16]	576,974	1,540,353	18	185,457	8	182,538	32
33	37	**Frontier Holdings** (Denver)[17]	539,839	552,730	38	17,150	28	177,918	33
34	40	**PSA** (San Diego)	475,609	753,628	30	19,455	27	165,896	34
35	*	**Tidewater** (New Orleans)[18]	466,341	654,119	35	71,468	13	303,315	24
36	43	**Arkansas Best** (Fort Smith, Ark.)	433,947	204,429	45	(10,542)	40	30,389	44
37	39	**Allied Van Lines** (Broadview, Ill.)	408,307	54,643	50	1,791	38	16,843	47
38	45	**Ozark Air Lines** (St. Louis)	403,284	261,894	44	7,542	33	105,592	37
39	44	**Alexander & Baldwin** (Honolulu)	397,538	712,876	32	40,113	17	360,741	20
40	48	**Kansas City Southern Industries** (Kansas City, Mo.)	384,291	622,259	36	33,280	19	259,346	27
41	41	**Chicago Milwaukee St. Paul & Pacific RR** (Chicago)	370,544	1,046,698	24	5,653	34	318,159	23
42	19	**Braniff International** (Dallas-Fort Worth)	367,632	554,735	37	(351,038)	49	(445,469)	50
43	47	**United Van Lines** (Fenton, Mo.)	357,728	61,802	49	2,206	37	18,441	46
44	*	**Mayflower** (Carmel, Ind.)	341,225	82,159	48	4,270	36	30,595	43
45	42	**Rio Grande Industries** (Denver)	331,726	670,783	34	24,385	25	429,202	19
46	*	**Southwest Airlines** (Dallas)	331,189	420,542	40	34,004	18	240,627	30
47	49	**Overseas Shipholding Group** (New York)	330,280	1,276,493	20	60,626	14	554,263	14
48	*	**Bekins** (Glendale, Calif.)	327,499	120,061	46	8,524	32	64,013	41
49	50	**RLC** (Wilmington)[19]	301,279	373,269	41	3,683	31	90,383	38
50	*	**Interstate Motor Freight System** (Grand Rapids, Mich.)	295,987	90,861	47	(18,665)	41	10,543	48
		TOTALS	77,037,975	87,615,483		2,298,178		29,233,121	

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*Not on last year's list.
N.A. Not available.

[1] Consolidated operating revenues include those from non-transportation activities and sales from discontinued operations when these are published. All figures are for the year ending December 31, 1982, unless otherwise noted. All companies must derive more than 50% of their operating revenues from carrier operations and file public financial statements.

[2] Net income for all railroads has been calculated according to generally accepted accounting principles.

[3] Figure is for Seaboard Coast Line Industries.

[4] Company was formed as a holding company for American Airlines and its subsidiaries on October 1, 1982.

[5] Figures are for fiscal year ending June 30, 1982.

[6] Formed by the merger of Norfolk & Western Railway (1981 rank 14) and Southern Railway (1981 rank 15) on June 1, 1982.

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS			
		OPERATING REVENUES		STOCKHOLDERS' EQUITY					1972-82 GROWTH RATE		1982		1972-82 AVERAGE	
NUMBER	RANK	PERCENT	RANK	PERCENT	RANK	1982 $	1981 $	1972 $	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK
57,000†	4	0.6	35	2.8	35	1.03**	(2.40)	0.80	2.56	24	101.49	4	2.19	28
123,846	1	6.4	16	30.0	5	1.97	1.94	N.A.	—		—		—	
95,000	2	0.6	34	3.5	34	0.25	2.15**	3.01	(22.03)	30	90.00	7	(3.83)	33
59,500	3	6.9	13	10.0	25	8.10	8.92	4.29[9]	6.56	20	(6.96)	38	9.81	18
42,772	6	6.8	14	10.0	24	7.29	7.02	1.90	14.55	6	2.18	33	11.35	13
41,500	7	—		—		(1.00)	1.21	0.20	—		125.04	2	0.57	30
39,200	9	—		—		(3.82)	(3.44)	1.02‡	—		36.05	19	(9.88)	36
29,071	12	—		—		(6.30)	(0.27)	(0.72)	—		32.00	20	(8.68)	35
36,897	10	0.6	36	2.0	36	0.52	3.69	1.10	(7.22)	28	84.70	9	5.33	25
41,260‡	8	12.2	7	11.8	18	6.57	8.94[7]	1.36‡[7]	17.06	3	10.75	29	15.92	7
34,241	11	5.7	17	7.3	29	2.08	2.73	1.08	6.77	17	11.24	27	12.78	11
42,900	5	3.9	22	5.1	32	4.31	6.18	4.06	0.60	26	(4.66)	37	5.05	27
13,754	19	0.3	38	0.6	38	0.23	0.48	0.83	(12.04)	29	77.05	11	5.32	26
13,200	20	—		—		(8.04)	(0.98)	2.42	—		(37.07)	40	(11.53)	37
14,426	18	—		—		(1.99)	(2.30)	0.60***	—		91.06	6	8.28	19
13,000	21	—		—		(7.2[illegible])	(8.11)	(1.08)	—		94.01	5	10.62	15
212‡	48	26.5	4	663.3	1	N.A.	N.A.	N.A.	—		—		—	
11,046	23	4.6	18	12.9	14	3.35	3.13	1.01**	12.74	9	180.93	1	7.62	21
16,700	15	4.6	19	11.0	21	4.08	10.63**	1.98	7.50	14	30.58	21	12.83	10
17,900	14	6.6	15	16.7	9	3.83	4.25**	1.[illegible]5	12.78	8	53.33	15	9.94	17
14,752	16	2.5	27	9.8	26	2.22	3.70	1.37	4.95	21	53.55	14	8.14	20
9,760‡	26	—		—		(3.56)	(5.81)	0.75	—		7.71	31	(4.91)	34
14,600	17	1.1	32	5.0	33	0.75	2.34**	1.11	(3.84)	27	25.97	23	1.03	29
11,000	24	—		—		N.A.	N.A.	N.A.	—		—		—	
890	45	30.7	3	54.0	3	N.A.	N.A.	N.A.	—		—		—	
899	44	35.6	1	45.2	4	N.A.	N.A.	N.A.	—		—		—	
10,092‡	25	9.8	10	22.4	7	3.70	2.89	N.A.	—		18.80	25	—	
11,756‡	22	—		—		(1.43)	3.89	N.A.	—		0.00	34	—	
18,937	13	3.8	23	20.9	8	4.36	4.06	1.67	10.07	12	41.20	17	6.20	24
8,091	27	4.3	20	12.0	16	3.20	4.41	1.13**	10.97	10	8.92	30	16.52	5
4,800	32	1.8	29	13.5	12	0.65	1.20	0.54	1.87	25	28.44	22	(2.31)	32
3	50	32.1	2	101.6	2	N.A.	N.A.	N.A.	—		—		—	
5,338	30	3.2	24	9.6	27	1.77	3.41	0.90**	7.00	16	3.91	32	13.85	8
3,744	36	4.1	21	11.7	19	3.56	6.19	1.46**	9.32	13	58.10	12	7.05	22
4,000	33	15.3	6	23.6	6	4.12	3.15	0.57	21.87	1	(37.34)	41	11.27	14
7,495	28	—		—		(2.85)	4.23**	1.59	—		11.33	26	(0.34)	31
846	46	0.4	37	10.6	23	1.71	2.20	1.28	2.94	23	—		—	
3,993	34	1.9	28	7.1	30	0.77	2.09	0.38	7.32	15	79.51	10	12.33	12
3,700	37	10.1	9	11.1	20	4.36	2.66	0.84‡	17.90	2	50.24	16	18.76	4
3,841	35	8.7	11	12.8	15	3.35	3.95	0.72	16.62	4	39.29	18	27.68	2
5,941‡	29	1.5	30	1.8	37	2.59	91.90	(1.14)‡	—		(9.95)	39	22.32	3
210	49	—		—		(17.54)	(8.02)	0.85	—		(66.67)	42	(24.89)	38
630	47	0.6	33	12.0	17	378.00	195.00	135.43	10.81	11	—		—	
1,236	43	1.3	31	14.0	11	1.65	1.64	0.36	16.44	5	120.69	3	—	
3,315	40	7.4	12	5.7	31	3.45	7.53	2.39	3.74	22	56.47	13	15.92	6
2,913	41	10.3	8	14.1	10	1.60	1.69	(0.14)**	—		85.53	8	54.38	1
2,050	42	18.4	5	16.9	22	2.35	3.43	0.62	14.25	7	(1.54)	35	6.40	23
3,625	38	2.6	26	13.3	13	2.19	2.05	1.14	6.75	18	21.71	24	10.32	16
3,400	39	2.9	25	9.6	28	0.72	1.20	0.38	6.60	19	11.05	28	13.38	9
5,000	31	—		—		(5.80)	0.11**	N.A.	—		(3.43)	36	—	
910,282														

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[7] Figure is for Norfolk & Western Railway.

[8] Figure is for North Central Airlines.

[9] Figures reflect merger of Continental Air Lines (1981 rank: 23) on October 28, 1982.

[10] Wholly owned by Standard Oil of Ohio (No. 21 on the FORTUNE 500).

[11] Name changed from Roadway Express on July 30, 1982.

[12] Wholly owned by IC Industries (No. 94 on the FORTUNE 500).

[13] Wholly owned by Atlantic Richfield (No. 12 on the FORTUNE 500).

[14] Wholly owned by Exxon (No. 1 on the FORTUNE 500).

[15] Figures are for fiscal year ending May 31, 1982.

[16] Wholly owned by British Petroleum (No. 2 among the 1981 Industrial Corporations Outside the U.S.).

[17] Company formed as holding company for Frontier Airlines on May 6, 1982.

[18] Figures are for fiscal year ending March 31, 1982.

[19] Figures are for fiscal year ending September 30, 1982.

THE 50 LARGEST UTILITIES RANKED BY ASSETS

RANK		COMPANY	ASSETS[1]	OPERATING REVENUES[2]		NET INCOME		STOCKHOLDERS' EQUITY	
1982	1981		$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK
1	1	**American Telephone & Telegraph** (New York)	148,185,500	65,093,000	1	7,278,800	1	62,214,400	1
2	2	**GTE** (Stamford, Conn.)[3]	22,293,550	12,066,410	2	835,626	2	5,815,541	3
3	4	**Pacific Gas & Electric** (San Francisco)	13,635,318	6,785,095	3	810,178	3	5,943,876	2
4	6	**Commonwealth Edison** (Chicago)	12,582,004	4,129,666	13	606,741	4	4,372,735	4
5	3	**Southern Co.** (Atlanta)	12,301,201	4,927,183	7	472,331	7	3,503,903	7
6	5	**American Electric Power** (Columbus, Ohio)	12,223,786	4,179,955	11	335,027	12	3,462,543	8
7	8	**Middle South Utilities** (New Orleans)	10,364,653	2,901,730	23	310,595	13	2,481,916	14
8	7	**Southern California Edison** (Rosemead)	10,157,564	4,302,602	10	555,754	5	3,863,884	6
9	10	**Texas Utilities** (Dallas)	8,021,407	3,238,025	19	428,646	8	2,810,195	11
10	11	**Public Service Electric & Gas** (Newark)	7,906,967	3,873,976	14	342,827	10	3,080,877	9
11	9	**Consolidated Edison** (New York)	7,873,069	5,067,404	6	492,551	6	3,988,974	5
12	14	**Detroit Edison**	7,635,741	2,123,254	33	254,701	20	2,310,717	16
13	13	**Consumers Power** (Jackson, Mich.)	7,593,816	2,731,081	24	280,549	16	2,373,626	15
14	12	**Virginia Electric & Power** (Richmond)	7,359,356	2,360,770	31	278,589	18	2,535,070	13
15	16	**Philadelphia Electric**	7,157,998	2,644,753	26	336,223	11	2,626,907	12
16	15	**Duke Power** (Charlotte, N.C.)	7,057,780	2,244,480	32	398,181**	9	2,812,627	10
17	17	**Florida Power & Light** (Miami)	6,850,559	2,940,833	22	301,070	15	2,207,343	17
18	18	**Houston Industries**	5,672,036	3,838,346	16	126,195	47	1,826,952	21
19	20	**Pennsylvania Power & Light** (Allentown)	5,530,939	1,219,548	45	278,886	17	1,875,070	20
20	25	**Long Island Lighting** (Mineola, N.Y.)	5,349,725	1,633,517	38	309,394	14	2,032,689	18
21	26	**Ohio Edison** (Akron)	5,247,138	1,429,626	42	215,729	26	1,800,706	22
22	19	**General Public Utilities** (Parsippany, N.J.)	5,180,661	2,405,527	28	37,507**	50	1,436,814	33
23	24	**Columbia Gas System** (Wilmington)	5,154,666	5,070,591	5	184,538	32	1,458,326	30
24	22	**Central & South West** (Dallas)	5,134,916	2,389,253	30	234,131	21	1,659,112	24
25	30	**Panhandle Eastern** (Houston)	5,060,625	3,391,465	18	219,876	25	1,441,661	31
26	21	**Carolina Power & Light** (Raleigh, N.C.)	4,950,955	1,538,165	41	227,147	24	1,748,183	23
27	23	**United Telecommunications** (Westwood, Kans.)	4,753,696	2,419,169	27	201,563	30	1,503,767	28
28	27	**Niagara Mohawk Power** (Syracuse, N.Y.)	4,736,295	2,393,771	29	268,534	19	1,890,650	19
29	31	**Union Electric** (St. Louis)	4,630,797	1,217,705	46	205,466	28	1,601,632	26
30	29	**Texas Eastern** (Houston)	4,541,537	5,654,353	4	161,334	35	1,358,055	36
31	32	**Pacific Power & Light** (Portland, Ore.)	4,411,959	1,405,798	43	197,314	31	1,584,894	27
32	35	**El Paso** (Houston)	4,179,589	4,364,042	8	59,176**	49	540,507	50
33	33	**Northeast Utilities** (Berlin, Conn.)	4,028,639	1,763,220	35	151,242	42	1,159,698	40
34	28	**American Natural Resources** (Detroit)	3,980,300	3,097,200	21	161,100	36	943,600	48
35	34	**InterNorth** (Omaha)	3,954,058	4,158,986	12	135,066	45	1,361,816	35
36	38	**Arizona Public Service** (Phoenix)	3,888,536	1,064,453	49	231,043	23	1,611,200	25
37	39	**Transco Energy** (Houston)[4]	3,866,224	3,869,329	15	136,952	44	739,431	49
38	36	**Continental Telecom** (Atlanta)[5]	3,864,625	1,817,689	34	150,467	43	1,066,230	44
39	37	**Cleveland Electric Illuminating**	3,843,294	1,108,571	47	208,964	27	1,227,095	38
40	41	**Public Service Co. of Indiana** (Plainfield)	3,813,198	899,394	50	233,232	22	1,497,847	29
41	40	**Gulf States Utilities** (Beaumont, Tex.)	3,806,111	1,307,259	44	165,979	34	1,365,435	34
42	42	**Baltimore Gas & Electric**	3,513,136	1,595,471	39	174,805	33	1,438,193	32
43	44	**Northern Indiana Public Service** (Hammond)	3,449,809	1,732,728	37	103,235	48	1,043,203	45
44	43	**Allegheny Power System** (New York)	3,420,827	1,751,811	36	160,668	37	1,077,605	43
45	46	**Consolidated Natural Gas** (Pittsburgh)	3,271,881	3,210,985	20	159,804	38	1,162,792	39
46	49	**Pacific Lighting** (Los Angeles)	3,257,079	4,359,072	9	128,853	46	1,013,371	46
47	45	**Northern States Power** (Minneapolis)	3,196,889	1,560,916	40	157,693	39	1,156,780	41
48	47	**Sonat** (Birmingham, Ala.)	3,139,482	2,680,561	25	204,639	29	1,135,308	42
49	48	**Illinois Power** (Decatur)	3,092,522	1,106,775	48	156,395	41	1,228,633	37
50	50	**Enserch** (Dallas)	3,079,070	3,787,675	17	157,353	40	980,566	47
		TOTALS	448,200,513	212,763,188		20,222,669		161,372,955	

[1] Assets are shown as of December 31, 1982, unless otherwise noted. Only assets of consolidated subsidiaries are included.

[2] Gross receipts from operations during the 1982 fiscal year, including any non-utility revenues from manufacturing, transportation, etc., and revenues from discontinued operations when they are published. All companies on the list must have derived more than 50% of their revenues from utility operations.

NET INCOME AS PERCENT OF EQUITY		EMPLOYEES		EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS			
							1972-82 GROWTH RATE		1982		1972-82 AVERAGE	
PERCENT	RANK	NUMBER	RANK	1982 $	1981 $	1972 $	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK
11.7	41	991,596	1	8.40	8.55	4.34	6.83	14	10.25	39	9.01	15
14.4	13	196,000	2	4.70	4.32	2.60	6.10	16	38.63	10	11.39	6
13.6	23	26,023	5	4.91	3.41	3.02	4.98	20	47.53	2	8.25	22
13.9	19	17,200	11	3.75	3.06	3.13	1.82	37	41.12	6	6.50	35
13.5	24	29,882	3	2.38	1.81	1.88	2.39	34	44.06	4	8.47	18
9.7	48	24,269	6	2.03	2.37	2.63	(2.56)	47	23.13	33	5.44	41
12.5	33	13,865	14	2.33	2.44	1.98	1.64	38	30.97	24	3.75	45
14.4	12	15,797	13	5.13	4.93	2.55	7.24	11	33.69	23	11.69	4
15.3	7	16,500	12	3.85	3.51	1.95	7.04	12	29.93	27	3.29	47
11.1	42	13,118	15	3.24	2.63	2.44	2.88	32	43.23	5	10.74	8
12.3	35	22,609	7	3.55	3.22	1.04	13.06	2	36.50	14	14.74	2
11.0	43	11,208	22	1.75	2.02	2.09	(1.76)	45	30.14	26	7.21	30
11.8	40	12,936	16	3.16	3.12	2.72	1.51	39	28.84	28	7.61	25
11.0	44	12,818	17	1.98	1.77	2.08	(0.49)	44	35.32	20	5.79	40
12.8	29	10,156	26	2.39	2.25	2.08	1.40	40	39.89	9	8.68	17
14.2	16	20,274	10	3.59	3.19	1.69	7.83	8	23.58	32	9.27	14
13.6	21	12,514	18	5.49	4.25	2.69	7.39	10	34.58	22	6.75	33
6.9	49	10,769	23	1.62	3.14	2.07	(2.42)	46	22.27	34	2.04	49
14.9	11	8,208	33	3.35	3.40	2.48	3.05	31	36.06	17	8.33	20
15.2	9	6,012	44	2.70	2.55	2.20	2.07	35	35.25	21	7.57	26
12.0	38	7,885	35	2.13	2.30	1.91	1.10	42	35.57	18	6.10	39
2.6	50	12,420	19	0.61**	(0.26)‡	2.21	(12.08)	50	0.00	42	(4.01)	50
12.7	32	12,258	20	5.10	5.50	3.20	4.77	23	(1.21)	43	7.33	29
14.1	18	8,936	30	2.82	2.54	1.63	5.63	18	37.33	12	4.62	43
15.3	8	7,300	38	5.36	6.52	2.89**	6.37	15	(22.31)	49	7.55	27
13.0	27	8,342	32	3.17	3.06	2.86	1.03	43	18.03	35	6.25	37
13.4	25	29,309	4	2.49	3.47	1.49	5.27	19	3.86	40	6.75	34
14.2	15	10,300	25	2.64	2.35	1.81	3.85	24	40.48	8	9.44	12
12.8	28	7,294	39	2.17	1.90	1.35	4.86	22	40.96	7	8.47	19
11.9	39	6,500	43	6.28	8.70	3.20	6.97	13	17.99	36	4.60	44
12.4	34	9,252	28	3.03	2.82	2.18	3.35	30	30.29	25	7.42	28
10.9	45	8,200	34	1.20	3.07	2.05	(5.21)	49	(2.58)	44	9.77	9
13.0	26	8,692	31	1.76	1.29	1.57	1.15	41	46.95	3	8.24	23
17.1	3	11,759	21	6.77	6.91	4.19	4.91	21	(13.19)	46	6.17	38
9.9	46	10,621	24	3.01	5.43	0.97	11.99	3	(7.61)	45	15.93	1
14.3	14	7,047	40	3.30	3.26	2.29	3.72	27	38.18	11	9.51	11
18.5	1	3,542	50	5.26	5.41	2.01	10.10	4	(40.38)	50	11.50	5
14.1	17	21,698	8	2.32	2.34	1.60	3.79	26	11.46	38	3.68	46
17.0	4	5,411	46	3.01	2.52	2.15	3.42	29	37.13	13	8.09	24
15.6	6	5,351	47	4.55	3.42	2.07	8.19	7	36.27	15	7.10	31
12.2	36	4,815	48	1.95	2.24	1.59	2.06	36	25.80	31	5.01	42
12.2	37	9,118	29	4.07	3.70	2.83	3.70	28	36.27	16	9.37	13
9.9	47	6,715	42	1.55	1.37	2.25	(3.66)	48	28.42	29	2.20	48
14.9	10	5,869	45	3.41	3.03	2.35	3.79	25	61.44	1	9.71	10
13.7	20	7,543	36	3.90	3.72	1.65	8.98	6	(0.52)	41	12.27	3
12.7	31	10,099	27	4.57	4.52	2.23	7.44	9	14.48	37	10.85	7
13.6	22	7,520	37	4.79	3.89	2.75	5.71	17	35.35	19	8.68	16
18.0	2	7,000	41	5.05	4.24	1.18	15.65	1	(17.92)	47	8.30	21
12.7	30	3,993	49	3.04	2.84	2.38	2.48	33	27.16	30	6.29	36
16.0	5	21,078	9	2.70	3.55	1.12	9.20	5	(18.41)	48	6.89	32
		1,757,621										

[3] Name changed from Generai Telephone & Electronics on July 1, 1982.
[4] Named changed from Transco Companies on May 12, 1982.
[5] Name changed from Continental Telephone on May 5, 1982.

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Gibraltar Financial Corp. of Cal.	F29
Gibraltar Savings Assoc.	F37
Girard	B66
Golden West Financial	F19
Grain Terminal Association	S21
Grainger (W.W.)	S70
Grand Union	R18
Great Atlantic & Pacific Tea	R13
Great Western Financial	F10
Guardian of America	L39
Guarantee Finan. Corp. of Cal.	F49
Gulf States Utilities	U41
Gulf United	F38
H	
Hall (Frank B.) & Co.	F77
Halliburton	S 4
Hanover Insurance	F72
Harris Bankcorp	B36
Hartford National Corp.	B75
Heller (Walter E.) International	F22
Hilton Hotels	S91
Holiday Inns	S31
Home Life	L42
Homestead Financial	F97
Hospital Corp. of America	S12
Household International	R 7
Houston Industries	U18
Humana	S36
Huntington Bancshares	B56
Hutton (E.F.) Group	F18
I	
IDS Life	L31
IU International	S26
Illinois Central Gulf Railroad	T24
Illinois Power	U49
Imperial Corp. of America	F27
InterFirst Corp.	B14
InterNorth	U35
Interpublic Group of Companies	S95
Inter-Regional Financial Group	F78

Interstate Motor Freight System	T50
IntraWest Financial Corp.	B96
Irving Bank Corp.	B17
J	
Jewel Companies	R16
John Hancock Mutual	L 6
K	
Kaneb Services	S80
Kansas City Southen Industries	T40
Kay	S87
Kemper	F23
Kemper Investors Life	L50
K mart	R 3
Kroger	R 4
L	
Landmark	S81
Leaseway Transportation	T21
Liberty	F84
Liberty National	L46
Lincoln First Banks	B80
Lincoln National	F13
Lincoln National Life	L17
Loews	F12
Lomas & Nettleton Financial	F91
Long Island Lighting	U20
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M	
[illegible]	S35
[illegible]A Entertainment	S69
Macy (R.H.)	R27
Malone & Hyde	S24
Manufacturers Hanover Corp.	B 4
Manufacturers National Corp.	B55
Marine Midland Banks	B16
Marriott	R32
Marsh & McLennan Companies	F85
Maryland National Corp.	B60
Massachusetts Mutual	L11
May Department Stores	R20
Mayflower	T44
McDonald's	R30
Mellon National Corp.	B15
Melville	R22
Mercantile Bancorp.	B52
Mercantile Stores	R45
Mercantile Texas Corp.	B27
Mercury Savings	F63
Merrill Lynch & Co.	F 6
Metromedia	S98
Metropolitan	L 2
Michigan National Corp.	B42
Middle South Utilities	U 7
Midlantic Banks	B72
Minnesota Mutual Life	L38
Mission Insurance Group	F82
Monarch Capital	F74
Montgomery Ward	R15
Morgan (J.P.) & Co.	B 5
Morrison-Knudsen	S19
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NCNB Corp.	B26
Naples Fed. Sav. & Loan Assoc.	F92
Nash-Finch	S52
National Bank of North America	B41
National City Corp.	B40
National Investors Pension	L26
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National Medical Enterprises	S46
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Niagara Mohawk Power	U28
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Norfolk Southern	T10
Norstar Bancorp.	B86
Northeast Utilities	U33
Northern Indiana Public Service	U43
Northern States Power	U47
Northern Trust Corp.	B44
Northwest Airlines	T13
Northwest Bancorp.	B20
Northwestern Mutual	L10
Northwestern National	L44
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Ohio Casualty	F58
Ohio Edison	U21
Old Republic International	F70
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Pacific Lighting	U46
Pacific Mutual	L24
Pacific Power & Light	U31
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Pan American World Airways	T 8
Panhandle Eastern	U25
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Trans World	T 3
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NOTES TO THE FORTUNE SERVICE 500 DIRECTORY

ASSETS

Assets are those shown at the company's year-end.

NET INCOME

Net income is shown after taxes and after extraordinary credits or charges when any are shown on the income statement. A double asterisk (**) signifies an extraordinary credit reflecting at least 10% of the net income shown, a double dagger (‡) an extraordinary charge of at least 10%. Figures in parentheses indicate a loss.

STOCKHOLDERS' EQUITY

Stockholders' equity is the sum of capital stock, surplus, and retained earnings at the company's year-end. Redeemable preferred stock is excluded when its redemption is either mandatory or outside the control of the company.

EMPLOYEES

The figure shown is a year-end total except when it is followed by a dagger (†), in which case it is an average for the year.

EARNINGS PER SHARE

For all companies the figures shown are the primary earnings per share that appear on the company's income statement. These figures are based on a weighted average of the number of common shares and common-stock equivalents outstanding during the year. Common-stock equivalents generally include (a) convertible securities whose cash yield is less than two-thirds of the prime rate at the time the securities were issued and (b) options and warrants when the effect of their inclusion in the computation would reduce the primary earnings per share. Per-share earnings for 1981 and 1982 are adjusted for stock splits and stock dividends. They are not restated for mergers, acquisitions, or accounting changes made after 1972. A double asterisk (**) signifies an extraordinary credit reflecting at least 10% of the net income shown, a double dagger (‡) an extraordinary charge of at least 10%. Results are listed as not available (N.A.) if the companies are co-operatives, joint ventures, or wholly owned subsidiaries of other companies, or if the figures were not published. The growth rate is the average annual growth, compounded. No growth rate is given if the company had a loss in either 1972 or 1982.

TOTAL RETURN TO INVESTORS

The total return to investors includes both price appreciation and dividend yield to an investor in the company's stock. The figures shown assume sales at the end of 1982 of stock owned at the end of 1972 or 1981. It has been assumed that any proceeds from cash dividends, the sale of rights and warrant offerings, and stock received in spin-offs were reinvested at the end of the year in which they were received. Returns are adjusted for stock splits, stock dividends, recapitalizations, and corporate reorganizations as they occur; however, no effort has been made to reflect the cost of brokerage commissions or of taxes. Results are listed as not available (N.A.) if shares are not publicly traded or traded on only a limited basis. If companies have more than one class of shares outstanding, only the more widely held and actively traded has been considered.

Total return percentages shown are the returns received by the hypothetical investor described above. The ten-year figures are annual averages, compounded. If corporations were substantially reorganized—e.g., because of mergers—the predecessor companies used in calculating total return are the same as those cited in the footnotes to the earnings-per-share figures.

Most of the figures in the FORTUNE Service 500 Directory were prepared by reporter John Paul Newport. The figures on per-share earnings and on total return to investors were prepared by Claudine Knight.

Reprints of this year's FORTUNE Directory will be available in September. The directory will include the FORTUNE 500 (published May 2) and the FORTUNE Service 500 (from this issue). Single copies of the reprints are $7 each; 25 to 99 copies, $6 each; 100 or more, $5 each. Please address inquiries and payment to Fortune, 1983 Directory, P.O. Box 8001, Trenton, N.J. 08650. Payment must accompany order.

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SPECIAL REPORT

BREAKING UP THE PHONE COMPANY

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FORTUNE

James Rosenquist's cover painting takes as its theme the pulling apart of Ma Bell's empire. A comprehensive special report on what the epochal AT&T breakup will mean for the newly created companies, competitors, investors, and phone customers begins on page 60.

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TAKEOVERS/LEE SMITH

WANT TO BUY A JAPANESE COMPANY?

■ For a Japanese to sell his company to a foreigner used to be not only an enormous legal hassle but also a departure from good form akin to strangling one's children. In recent years the Japanese government has cut some of the red tape, and in certain circumstances selling a company to foreigners is now seen not as horrible, simply regrettable. With the loosened rules, a few foreign firms have found a quick—though not necessarily painless—way to squeeze into the Japanese market.

The opening is just a crack for now, but it's getting wider. In the decade from the mid-Fifties to the mid-Sixties only two companies were sold to foreigners, according to a survey by Bain & Co., a Boston management consulting group. Recently the pace has quickened to the rate of about two or three a year, bringing the total to 20. Foreigners have also bought substantial shares in 30 additional companies. (For a table showing the foreign stake in the ten largest Japanese industrial companies, see page 109.) The number of deals that have been consummated is few so far, but interest is rising rapidly. When Bain gave a show for Tokyo's American Chamber of Commerce in late May on how to acquire a Japanese company, 140 businessmen attended, twice the usual number at chamber programs.

MAKING MONEY in Japan may be less important to some outsiders than the chance to see how the Japanese do things at home, so as to compete with them better elsewhere. "If you want to know what's going on in Japanese technology, you've got to get into the business here, hands-on," maintains James C. Abegglen, a vice president in the Boston Consulting Group's Tokyo office. "You can't do it with just a listening post."

Foreign companies going it alone have scored some great successes. IBM of Japan, entirely owned by the American parent, earned $149 million last year, placing it among the most profitable dozen or so companies in Japan. But acquisitions have become more attractive for Americans because the strength of the dollar makes buying a Japanese company these days a relative bargain. Also, the traditional alternatives, such as tossing in with a Japanese company in a joint venture or starting from scratch, have lost some appeal. Many joint ventures have come apart at the seams, among them International Harvester's partnership with Komatsu and Dow Chemical's alliance with Asahi Chemical Industry. And building from the ground up is extremely expensive.

West joins East *at Kyoritsu Pharmaceutical.*

Although taking over a Japanese company may be a relatively fast and cheap way to get into the market, big and healthy companies are not available. (Japanese slang for unfriendly takeover is *nottori*, which also means hijacking.) Anyone trying to make a tender offer for a major company would be unlikely to pry enough shares free to get control, even if the government allowed him to try (see box, page 108). Most shares of companies listed on the Tokyo Stock Exchange are owned by other companies, often

KAKU KURITA

At a quarterly meeting *in Tokyo, Toho President Motomichi Susai (left) meets with the bosses from Pennsylvania: Rorer International Vice President James J. Martin, Senior Vice President Arthur H. Hackendahl, and President Robert E. Cawthorn. At right is Masahiro Kasagi, president of Systems International, which arranged Rorer's purchase of Toho.*

one another's customers and suppliers, and would be voted to maintain Japanese control.

Even a sick big company is out of reach. It is kept afloat by banks and other companies in its industrial group, or in the worst cases is taken over by another Japanese corporation, as the struggling camera maker Yashica was recently acquired by the industrial-ceramics manufacturer Kyocera. "Getting taken over by a U.S. company would be about tenth on the list of choices for a big Japanese company in trouble," says William N. Horton, a vice president in Goldman Sachs's Tokyo office.

In the U.S. an entrepreneur sells his small successful company to turn his assets into cash or because his heir would rather run an art gallery than a machine shop. In Japan companies are regarded as families—aggregates of people. To sell one is peculiar and to sell one to foreigners who do not hesitate to turn people out on the streets if that suits the owner's purpose is deplorable.

What is left for the foreign shopper, therefore, is mostly the small failures, companies that are either bankrupt already or whose sales and earnings projections curve ever downward. Three-quarters of the companies foreigners have purchased, says Bain, were also-rans in slow-growing industries, a category that consultants' lingo and common parlance alike call dogs. Among the canines Bain places Shibazaki Seisakusho, a bottle cap manufacturer of which Alcoa bought 50.5% for $2.5 million in 1979; Sunpole, a maker of household cleaning products taken over by Clorox for something under $5 million in 1981; and Tokyo Ryuki Seizo Kabushiki Kaisha, a drilling equipment manufacturer that Ingersoll-Rand bought for $1 million in 1975.

Money and technology can sometimes turn dogs into more ferocious beasts, which is why buyers are willing to take a chance on them. To serve such customers, a pet shop is likely to appear. Tokyo's is Systems International, a small firm that has been advising outsiders on joint ventures and licensing for 13 years, and for the past five on acquisitions as well. Systems' founder and chairman is T. Yoshitami Arai, 52, who started Japan's first trading stamp company. The firm's senior adviser is Donald P. Knode, 59, who went to Japan as a young U.S. Navy officer with the grim job of helping to assess the destruction at Hiroshima. In 1970 he opened Merrill Lynch's Tokyo branch.

What Systems offers clients is contacts and a knowledge of traditions. "You can't call up someone cold in this country and say, 'I want to buy your company,' " he observes. "When the Japanese National Railways wanted to buy up land for a right-of-way, it sent representatives out with bottles of sake to call on each property owner individually. That's the way things are done here."

IN NEGOTIATIONS, the heart of the matter—that ownership is going to change hands—is approached gradually and indirectly. "At first the Japanese owner can't accept the fact that he is selling his company," says Knode, "and so we talk about the foreign company taking a percentage of equity."

Even though the powerful dollar seems to buy a lot in Japan these days, Japanese companies tend to be overpriced by American standards. Companies traded on the Tokyo Stock Exchange currently sell for slightly over two times book value, compared with 1½ for Standard & Poor's 400 industrial companies. Owners of private companies expect similar prices. "If the financial guys back in the U.S. are going to be hardheaded," says Knode, "the deal isn't going to work." But, most important, the sellers want guarantees that they and their people are not going to be dismissed.

Systems' success has been modest to date: three acquisitions, including two for the same client, Rorer Group of Fort Washington, Pennsylvania. Rorer, a pharmaceutical company with sales of about $400 million last year, had long been present in Japan by proxy. Its best-known product, the antacid Maalox, is made under license by a Japanese company. Six years ago Rorer decided to come out of the shadows and plunge in. "We want to become a first-division company and you can't do that without being in the world's second-biggest pharmaceutical market," says James J. Martin, 49, vice president for Far East operations.

Rorer had at least one thing going for it: the Japanese drug industry, or at least part of it, was in terrible shape. In Japan doctors not only prescribe drugs, they buy them from wholesalers at low prices and sell them to patients who pay what they can. Then the doctors get additional reimbursement from the national health insurance program. The markup on the drugs is a major source of doctors' income. To keep health costs in line, the government has been hammering down the amounts that will be reimbursed, and the manufacturers have been under enormous pressure to cut the prices they charge doctors. The blows have fallen hardest on producers with the thinnest margins—small manufacturers of generic, as distinct from brand-name, drugs.

EVEN THOUGH his tiny company faced almost certain annihilation in a decade or so, Masahiro Yamazaki, president of Kyoritsu Pharmaceutical Industries, did not jump at the chance to be the first in his industry bought out by Americans. The company had been founded by his father. "I thought about it by myself for six months," says Yamazaki, 46. "Then I told the other executives and we all thought about it for another six months." In 1979 they started selling all but 2% of their shares to Rorer for $2.7 million in cash. The previous year Kyoritsu's sales had been $3.7 million.

In 1981 Rorer approached Toho Laboratories, a company whose prospects were similar to Kyoritsu's. "Two others were looking at us," says President Motomichi Susai, 46, "a French company and another American.

SILK'S NO BUSINESS FOR OUTSIDERS

■ In principle a foreign shopper can buy any Japanese company that catches his eye. In practice the Japanese government reserves the right to limit foreign ownership where outside control might imperil national security or interfere with the smooth operation of the economy. It is perhaps understandable why the government put half a dozen oil companies and a couple of defense contractors on the restricted list. Maybe a case can also be made that the government was being properly cautious in including Sankyo, a major pharmaceutical manufacturer. But why Katakura Industries? Katakura's supposedly strategic product is silk.

Tseng Hsiang Wang, 57, a Chinese who spent the war years in Japan selling fish to the army, is chairman of Newpis Hong Kong Ltd., an investment company that owns 10% of Katakura, worth about $6.8 million at recent stock prices. Katakura was once a redoubtable name in commerce, but recently the silk business has declined and Katakura barely ekes out a profit. Last year it earned only $1.5 million on sales of $224 million. A big share of those revenues, $6.4 million in 1982, goes to pay interest on its huge debt, especially to Fuji Bank, Japan's fourth-largest bank and a member of one of Japan's most powerful industrial groups.

What Katakura has going for it is valuable land, such as more than 40 acres around its idle plant in the Tokyo suburb of Omiya. Several years ago Wang suggested that Katakura sell or lease the Omiya land for apartment buildings and reduce the debt to Fuji. Management disagreed. But management might have found it difficult to be objective. Fuji, too, owns 10% of Katakura.

Even more important, the chairman of Katakura Industries, Tadashi Arita, 67, worked for Fuji before taking over Katakura. So had his two predecessors. Arita wanted to rent the Omiya land to Ito-Yokado, a chain of retail stores selling everything from food to hardware. Yokado is another Katakura shareholder, although a minor one, and a customer of Fuji Bank.

Maintaining that the income from apartments would be much greater than from a supermarket, Wang decided to increase Newpis's holdings of Katakura and make management do it his way. But when he routinely filed an application telling the government of his intentions, the word came back that it was out of the question. The silk and cocoon division of the Ministry of Agriculture, Forestry, and Fisheries had ruled that "the production of silk cocoons is essential to the Japanese economy." Foreign ownership of Katakura Industries, therefore, was capped at 25%. Newpis's share combined with that of other foreigners was just a thread below 25% already, and Wang could buy no more.

It is true that most Japanese women must have at least one silk kimono, but it is hard to see how foreign control of Katakura would ravel their wardrobes, especially since Katakura accounts for less than 15% of Japan's silk production. Wang has sued Katakura's management for fiduciary irresponsibility and the Japanese government for violating its own rules as well as its agreements with other nations to open its doors to investment. The courts will decide—but probably not for a year or two—whether the time has come to turn the strategic silkworm over to an outsider.

[illegible] BARTLETT—WOODFIN CAMP

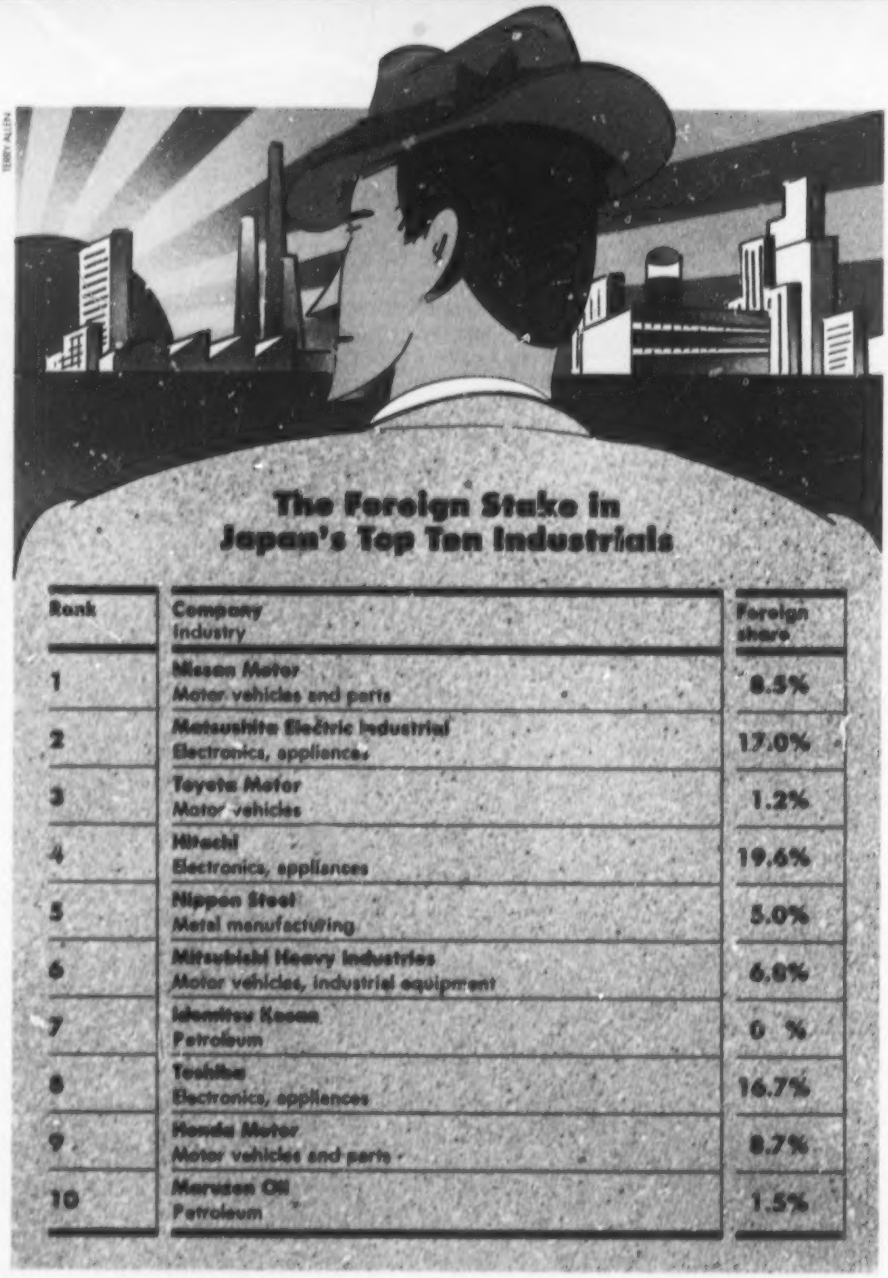
Hong Kong businessman *Tseng Hsiang Wang has been barred by Japan's government from buying a silk company.*

The French decided to set up their own business and the other American company wanted to be too drastic. They wanted 100% of our shares right away. We liked Rorer. They invited us to Pennsylvania to talk." Last year Susai and his family traded 72% of Toho Laboratories' stock for about $4 million in Rorer shares.

When Yamazaki and Susai proposed the American takeovers to their staffs, among the questions that popped up immediately were: Would promotions be based upon fluency in English? Could they look forward to working American hours? (Like many Japanese workers, they put in a six-day week.) Executives at Kyoritsu rushed out to buy a copy of a newly pertinent reference work, *A Wage Survey of Foreign Capital Affiliated Enterprises in Japan*. But what worried them most was whether the new owners would lay off managers and workers in tough times.

SO FAR LITTLE has changed at either company. Japanese is still the primary company language, and no American-style cutbacks have come to pass. Neither have American-style hours and salaries. Yamazaki and Susai say they continue to run their companies, now subsidiaries, with little interference from Fort Washington. At Kyoritsu Pharmaceutical Industries one of the few signs that the Yanks have landed is that the quality-control circles, perhaps in anticipation of the quarterly visit from headquarters, have strung banners with such slogans as "A waste of a minute costs us 40 yen" in both Japanese and English.

Rorer says that it is satisfied with its Japanese purchases. The generic drug trade has deteriorated further as the Japanese government continues to squeeze prices. But Rorer didn't buy Kyoritsu and Toho only for their existing businesses. It is transforming them into subsidiaries that will test, develop, manufacture, and distribute new Rorer drugs. Because it takes about five years to get a new drug approved and introduced in Japan, it will be a while before Rorer can tell whether its venture is a success.



The Foreign Stake in Japan's Top Ten Industrials

Rank	Company Industry	Foreign share
1	**Nissan Motor** Motor vehicles and parts	8.5%
2	**Matsushita Electric Industrial** Electronics, appliances	17.0%
3	**Toyota Motor** Motor vehicles	1.2%
4	**Hitachi** Electronics, appliances	19.6%
5	**Nippon Steel** Metal manufacturing	5.0%
6	**Mitsubishi Heavy Industries** Motor vehicles, industrial equipment	6.0%
7	**Idemitsu Kosan** Petroleum	0 %
8	**Toshiba** Electronics, appliances	16.7%
9	**Honda Motor** Motor vehicles and parts	8.7%
10	**Maruzen Oil** Petroleum	1.5%

Foreigners are free *to buy into even the most important Japanese companies, but when any foreign entity wants to increase its holdings above 10% it must notify the government. The only one of the ten largest Japanese industrials in which a single foreign investor has a substantial share is Toshiba, 7.7% of which is owned by General Electric. GE not only has half the foreign share in its competitor but also a larger share than any one Japanese investor.*

What Rorer could come to regret is that although it has bought two companies and therefore appears to enjoy all the privileges that come with ownership, in one important respect it has not bought control. If it should lose faith in the local management—even though there is no reason to think that it should—Rorer would be hard pressed to find replacements. The tradition of lifetime employment makes it difficult not only to fire old employees but also to find new ones. "You don't get a guy in his 50s to leave the company he's grown up in to come run yours," says Abegglen of Boston Consulting.

For that matter, the Japanese could find that those safe Rorer hands they placed themselves in aren't so secure after all. What happens if Rorer is swallowed by someone who doesn't think the company belongs in Japan? Susai of Toho says he doesn't worry about things he can't control. "When a young man and a young woman get married," he observes, "they don't think about how they might change in the future."

■ Enthusiasm for acquisitions will almost certainly grow as more foreign companies try to find a way into the Japanese market and as more Japanese who have been battered in that market look for a way out. But not all potential foreign buyers insist on full or even majority ownership; some will settle for a substantial minority share. That makes sense. A Japanese owner whose company is troubled but not exactly a dying dog might be willing to give up part, though not all, of his company to a foreigner with the resources he needs. So in settling for less than full ownership, the foreign shopper gets to pick among better-looking animals. ■

AUGUST 8, 1983

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FORTUNE

THE BULL MARKET'S BIGGEST WINNERS

$ 1.2 BILLION

David Packard

$624 MILLION

George P. Mitchell

$599 MILLION

William R. Hewlett

$515 MILLION

Jane B. Cook

443 MILLION

Kirk Kerkorian

COMPLETE LIST: SEE PAGE 36

BATTERED ATARI:
NEW BOSS,
NEW PLAN

PROTECTIONISM,
REAGAN-STYLE:
THE STEEL QUOTAS

U.S. EXPORTERS:
FORTUNE'S
TOP 50

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AUGUST 8, 1983

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FORTUNE
$ 1.2 BILLION
$624 MILLION
$599 MILLION
$515 MILLION
$443 MILLION

The biggest winners in the current bull market are entrepreneurs, not portfolio investors. For a revealing report on who made the most spectacular killings, see page 36.

COVER CREDITS: PACKARD AND HEWLETT PHOTOGRAPHED BY TED KURIHARA; MITCHELL BY DAN F. CONNOLLY, 1979; COOK BY CHARLES MOORE—BLACK STAR, 1971, KERKORIAN BY PETER C. BORSARI.

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THE BULL MARKET'S BIGGEST WINNERS

STOCKS/JEREMY MAIN

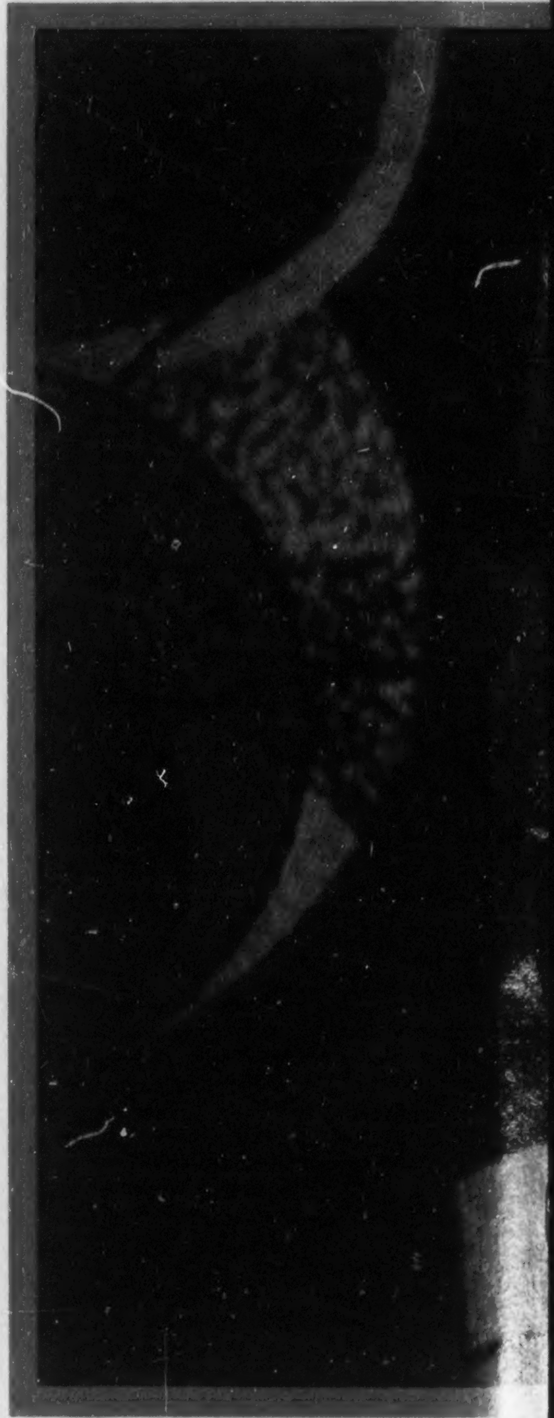
■ Fifty-three stockholders have each made paper profits of more than $100 million since the beginning of the bull market in the U.S. last August. One of them, David Packard, co-founder of Hewlett-Packard Inc., is richer by $1.2 billion (that's *billion*). Three others, including Packard's partner, William R. Hewlett, added more than $500 million to their fortunes.

The complete list of $100-million-and-up winners beginning on page 38 indicates that entrepreneurs and their heirs rather than portfolio investors make the really big stock market fortunes. It also shows that entrepreneurs can create enormous wealth quickly. Indeed, K. Philip Hwang, 46, who gained $247 million, wasn't even in the stock market until March, when he took his company, TeleVideo Systems Inc., public.

At the offering price of $18 a share, the 28.2 million TeleVideo shares (68.7% of the company) retained by Hwang were worth $508 million. When the price soared briefly to $40, he was worth more than $1.1 billion for a dizzying moment. The stock dropped to $26.75 at the beginning of July, bringing the value of his holdings down to $755 million. For purposes of this article, FORTUNE credited Hwang with a bull market gain of $247 million, the difference between the July 1 value of $755 million and the starting sum of $508 million.

An emigrant from South Korea, Hwang was sweeping casino floors in Lake Tahoe 15 years ago to work his way through Utah State University. When he incorporated TeleVideo in 1976, venture capitalists had no interest in helping at the company's birth. "I don't blame them," says Hwang. "I was just an engineer with an idea and no management experience." He mortgaged his house, his car, and his furniture to raise capital. Today TeleVideo is the leading supplier of video display terminals outside IBM. Says Hwang with feeling, "It's a miracle."

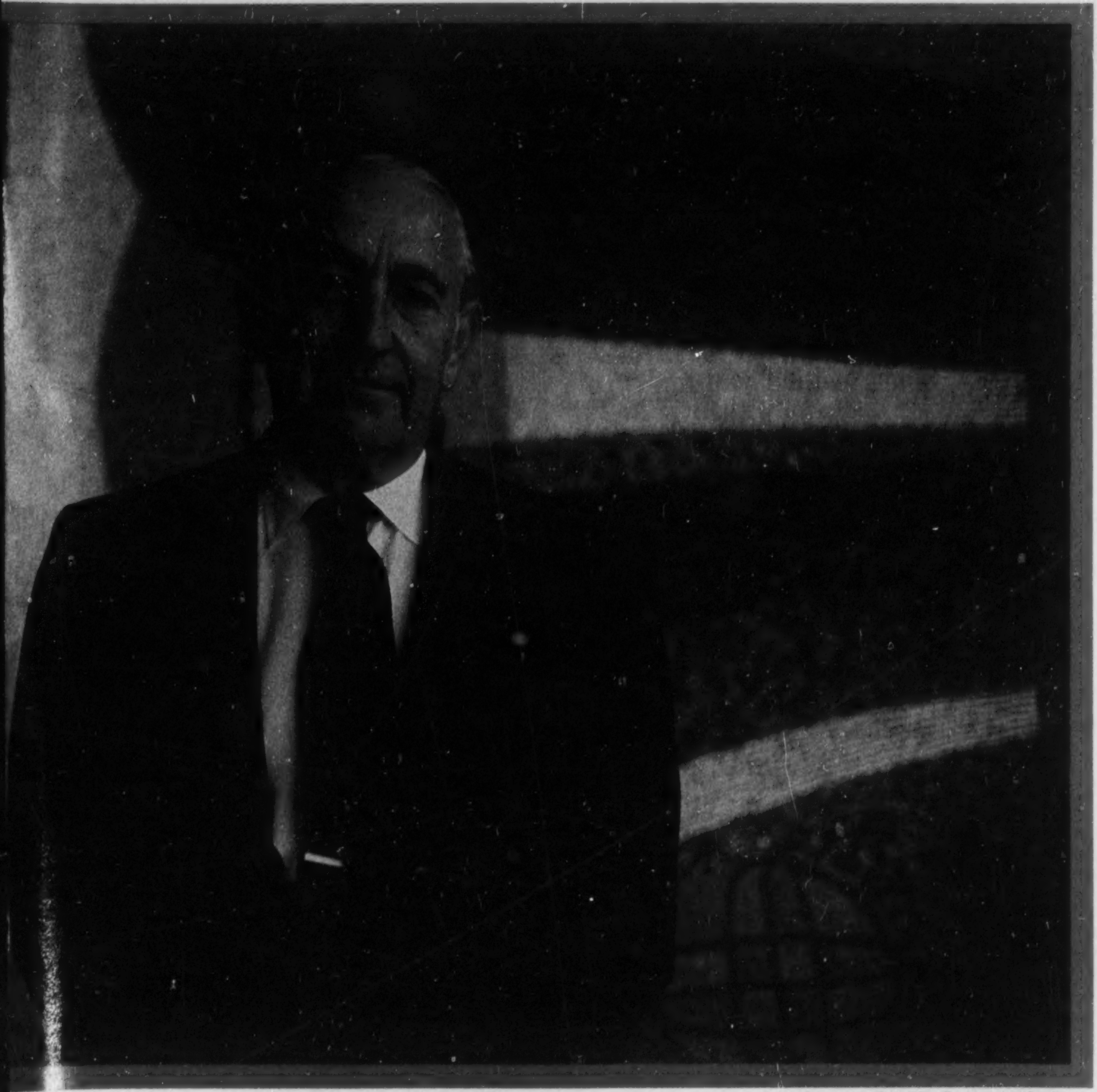
To find out who made the most in the bull market, FORTUNE enlisted the help of Computer Directions Advisers Inc., a publisher of financial statistics in Silver Spring, Maryland. The firm found 1,186 publicly traded companies whose total stock has appreciated by $100 million or more in the bull market. The rally's starting point was August 12, when the Dow Jones industrial average bottomed out at 776.9. In the next three months the market set off on one of the fastest climbs of the century, and prices continued to rise, though more slowly, in 1983. By July 1 the Dow stood at 1225.3, a gain of 57.7%, and



other measures were up even more: the New York Stock Exchange composite index had gained 66.5%.

To find the individual investors—as contrasted with institutions—who had the biggest chunks of the best-performing stocks, FORTUNE turned to Securities and Exchange Commission records. The SEC requires the disclosure of holdings and trades by all corporate directors and officers and by anyone

RESEARCH ASSOCIATES *Lucia Halpern, Philip Mattera, Kathleen Carroll Smyth*



JANET FRIES

$1.2 BILLION

David Packard

Co-founder, chairman, Hewlett-Packard

owning more than 5% of a company's shares. Unlike calculations of an individual's total wealth, which include undisclosed assets and liabilities and often come down to sheer guesswork, the gain in the value of shareholdings can be computed from the required disclosures. Computer Directions periodically publishes the disclosures. To confirm and update those data, we checked hundreds of proxy statements, company reports, SEC

NAME	Age	Residence	Company (percent owned)	Relationship to company	Value of shares on 7/1/83 Millions	GAIN IN BULL MARKET SINCE 8/12/82 Percent	Millions
GAINED OVER $1 BILLION							
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
GAINED $500 MILLION TO $999 MILLION							
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
WILLIAM R. HEWLETT	70	Palo Alto, Calif.	Hewlett-Packard (9.1%)	Co-founder, director	$1,045	**134%**	**$599**
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
GAINED $300 MILLION TO $499 MILLION							
KIRK KERKORIAN	66	Las Vegas	MGM Grand Hotels (48.5%) MGM/UA Entertainment (54.1%)	Investor	$651	**213%**	**$443**
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
DAVID B. SHAKARIAN	69	Pittsburgh	General Nutrition (59.5%)	Founder, C.E.O.	$472	**299%**	**$360**
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
SAM M. WALTON	65	Bentonville, Ark.	Wal-Mart Stores (8.2%)	Co-founder, C.E.O.	$441	**216%**	**$301**
GAINED $200 MILLION TO $299 MILLION							
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
JOHN T. WALTON	37	Coronado, Calif.	Wal-Mart Stores (8.1%)	Co-founder's son	$434	**216%**	**$297**
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
JAMES L. KNIGHT	74	Bal Harbour, Fla.	Knight-Ridder (28.6%)	Co-founder, director	$563	**106%**	**$290**
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
K. PHILIP HWANG	46	Sunnyvale, Calif.	TeleVideo Systems (68.7%)	Founder, C.E.O.	$755	**49%**	**$247**
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
JOHN W. KLUGE	69	New Rochelle, N.Y.	Metromedia (23.9%)	C.E.O.	$362	**176%**	**$230**
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
LEON LEVINE	46	Charlotte, N.C.	Family Dollar Stores (61.9%)	Founder, C.E.O.	$288	**311%**	**$220**
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
IRVING GOULD	64	Bahamas	Commodore International (17.7%)	Chairman	$288	**307%**	**$217**

The Centimillion-Dollar Winners

FORTUNE's listing of winners in the stock market is made up of individuals whose personal wealth in corporate shares increased by more than $100 million between August 12, 1982, and July 1, 1983. Only common stocks publicly traded in the U.S. were counted. Options, warrants, and convertible securities were omitted as having somewhat hypothetical value until the rights they convey are exercised. Family foundations were excluded, but trusts that benefit the investors were included. Most of the gains listed are paper profits, but bull market profits realized by sales before July 1 were taken into account. Stocks bought during the bull market were valued from the date of purchase. One company on the list, TeleVideo Systems, went public during the period. Only the gains achieved above the offering price of $18 per share were attributed to TeleVideo's founder, K. Philip Hwang. Mark Taper won't get to collect his full $304-million share of First Charter Financial because he had agreed before July 1 to sell it to Financial Corp. of America for $27 million less. Shares held in the names of spouses and dependent children were considered part of the investors' fortune, but the holdings of grown children, brothers and sisters, and more distant relatives were treated independently. Computer Directions Advisors Inc. of Silver Spring, Maryland, and Corporate Data Exchange of New York City helped FORTUNE develop the data.

files, and other sources, and enlisted the help of a New York City financial consulting company, Corporate Data Exchange, to analyze complicated family holdings.

The result is the list of 53 individuals whose identifiable stock market wealth in the U.S. increased by more than $100 million between August 12 and July 1. These individuals may have made additional profits (or losses) on holdings that are not recorded publicly. Some big winners might have escaped detection altogether; for example, astute investors who are neither insiders nor holders of 5% of a company's shares might conceivably have made $100 million or more with a diversified portfolio. But FORTUNE examined the performance of the best-known Wall Street gymnasts and found few who could claim $100-million leaps in their personal portfolios. The group's outstanding success: Warren E. Buffett, 52, the wizard of Omaha, whose known investments appreciated by $248 million in the less than 11 months since last August.

Some companies that performed best in the bull market did not produce huge individual winners because their shares are widely dispersed. For instance, the value of all outstanding IBM shares increased by $35.7 billion and of AT&T shares by $16.7 billion, but no publicly identified investor in either stock had nearly enough to make $100 million. Some of the most successful executives fell far short of that too. Thanks largely to Chairman Lee A. Iacocca's heroic efforts to revive Chrysler Corp. (with a little help from Uncle Sam), the price of the company's stock more than quadrupled, from $6.75 last August to $31.75 on July 1. But Iacocca had only 65,200 shares, which increased in value by a piffling $1.6 million. Even taking into account stock options he may have exercised, Iacocca could have gained only an additional $11 million. (When the U.S. government exercises its warrants to buy 14.4 million Chrysler shares at $13 each, it stands to make a profit of $270 million at the July 1 price.)

The biggest winners on the list in percentage terms held shares in Pulte Home Corp., a homebuilder based in Southfield, Michigan.

NAME	Age	Residence	Company (percent owned)	Relationship to company	Value of shares on 7/1/83 Millions	GAIN IN BULL MARKET SINCE 8/12/82 Percent	Millions
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
GORDON P. GETTY	49	San Francisco	Getty Oil (10%)	Founder's son, director	$551*	59%	$205
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
PRESTON R. TISCH	57	New York City	Loews (22%)	President	$399	98%	$200
GAINED $100 MILLION TO $199 MILLION							
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
ROBERT W. GALVIN	61	Barrington, Ill.	Motorola (6.6%)	C.E.O.	$346	125%	$193
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
S. MARK TAPER	82	Beverly Hills	First Charter Financial (34.3%)	C.E.O.	$304	149%	$182
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
EDGAR M. BRONFMAN	54	New York City	Seagram (11.9%)	Founder's son, C.E.O.	$343	107%	$178
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
RICHARD R. ROGERS	40	Dallas	Mary Kay Cosmetics (24.7%)	Founder's son, president	$251	144%	$151
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
WILLIAM DAVIDSON	60	Northville, Mich.	Guardian Industries (41.2%)	C.E.O.	$243	161%	$150
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
ANNE COX CHAMBERS	62	Atlanta	Cox Communications (18.2%)	Founder's daughter, director	$266	86%	$123
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
PHYLLIS LAMBERT	56	Montreal	Seagram (7.8%)	Founder's daughter	$223	107%	$115
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
WILLIAM A. FICKLING JR.	51	Macon, Ga.	Charter Medical (82.9%)	Founder, C.E.O.	$188	145%	$111
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
JAMES GROSFELD	46	Bloomfield Hills, Mich.	Pulte Home Corp. (16.6%)	C.E.O.	$125	555%	$107
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

* FORTUNE estimate assuming equal division of Sarah C. Getty trust among three of the founder's sons and the estate of a fourth son

A BULL MARKET IS . . . A BULL MARKET

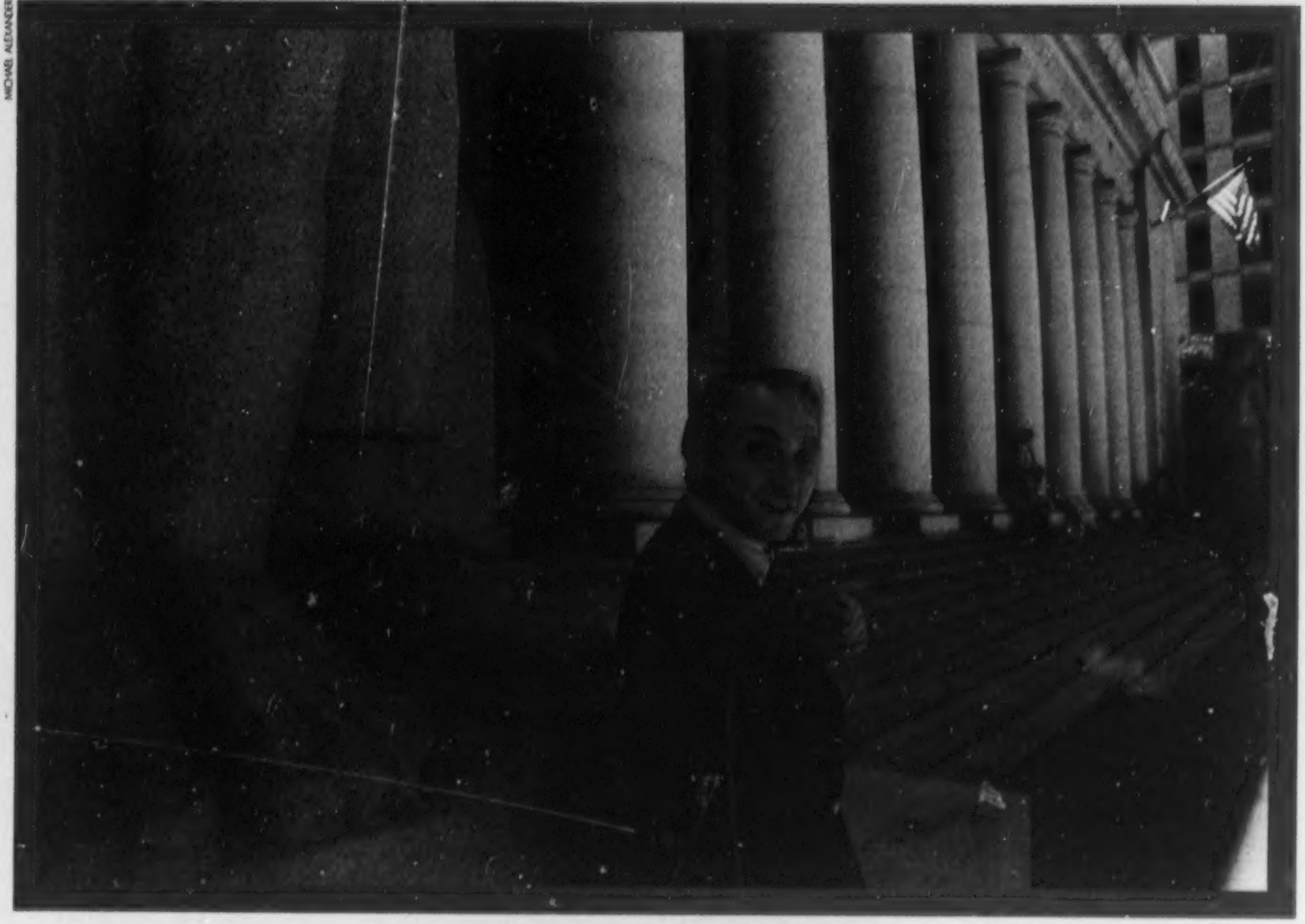
■ Anyone who hasn't spent the last year in Albania knows perfectly well that Wall Street is enjoying a robust bull market. How do we know? It's easy. A bull market is . . . well, uh, it's sort of when prices go up smartly for a spell. In fact, no precise definition exists. The Encyclopedia of Banking and Finance says feebly that a bull market is "a market in which the 'bulls' are in ascendancy and optimism and rising prices prevail." In other words a bull market is a bull market. The New York Stock Exchange has no definition of when a bull market begins or ends, but nevertheless claims that, not counting the current one, there have been exactly eight bull markets since World War II, lasting an average of 37 months and lifting the NYSE index by an average of 78%. If this bull market follows the usual form, it will peak soon after the next presidential election.

Some Wall Street buffs argue that a single bull market extended from the end of World War II until 1968 and that the stock exchange can find five in this period only by paying too much attention to minor setbacks. Professor Irwin Friend, the authority on the stock market at the Wharton School, says academics never have been able to agree on a definition. He says everyone would agree that the current bull market is genuine, and that the boom before the bust of 1929 was, but just about any other claim would be disputed. Only reluctantly was Friend drawn into agreeing that when stocks go up by 20% in a year, you probably have a bull market on your hands. The expert at MIT's Sloan School, Professor Fischer Black, dismissed the whole subject as "irrelevant." The market fluctuates randomly, he says, so dates and definitions are unimportant.

The stock climbed 556%, raising the holdings of the founder, William J. Pulte, by $239 million and of the chairman, James Grosfeld, by $107 million.

The list identifies big-winning individuals rather than extended families. FORTUNE attributed to individuals only shares held in their own names and in the names of their spouses and dependent children. Had brothers, sisters, grown children, or other relatives been lumped together, some fortunes listed would have grown markedly. Take the Walton family. Sam M. Walton of Bentonville, Arkansas, co-founder and chairman of the enormously successful Wal-Mart discount chain, and his four children would easily have topped the list, with a total gain of almost $1.5 billion. The father gained $301 million, and the children $297 million each. They control Wal-Mart through a holding company, Walton Enterprises Inc., in which each owns a one-fifth interest. Walton Enterprises in turn owns 41% of Wal-Mart. Sam Walton personally has an additional 39,712 shares.

Edgar M. and Charles R. Bronfman, chairman and deputy chairman of Seagram, together with their two sisters, would, if treat-



MICHAEL ALEXANDER

$440 MILLION

Leslie H. Wexner

Founder, chief executive, The Limited Inc.

ed as a family unit, have gained $587 million on their 40% share of the company. The brothers Tisch, Laurence A. and Preston R., chairman and president of Loews Corp., together made $397 million.

The run-of-the-mill executive who thinks his life would be fulfilled by, say, a mere $1 million worth of stock options, should not imagine that a paper profit of hundreds of millions has gone to the heads of the centimillionaires on FORTUNE's list. They are not importing medieval castles from Europe or otherwise spending conspicuously. Sam Walton drives a 1976 Chevrolet around what he calls "this dang little old town of Bentonville," where he lives and works. Tanned and tennis-fit at 65, he still leads the cheers at Saturday morning staff meetings. Philip Hwang's wife has kept her job as a dietitian at a Santa Clara hospital.

In a time that celebrates celebrity, the centimillion-dollar winners are refreshingly—and understandably—private. When Sam Walton's son Jim was asked recently what Walton Enterprises did besides hold Wal-Mart stock, he replied in a friendly way, "It's none of your business."

A few hundred million more is not likely to change the lives of people who already have a hundred million. The biggest winners, moreover, usually own so much stock in their companies that they cannot readily sell it without wrecking the market. They are also aware that paper profits made so quickly can disappear just as fast.

Indeed, some of the gains on FORTUNE's list represent no more than a partial recovery of past losses. George P. Mitchell, founder of Mitchell Energy & Development Corp., made $624 million in the bull market but is worth less than he was in 1980, when many oil companies hit their peak. Mitchell Energy dropped from a high of $45.60 a share to $10.75 last year. This year the stock climbed back to $32.625 and Mitchell recuperated three-fifths of a $1-billion paper loss.

Much of the Bronfman family's $587-million gain can probably be traced to a recovery in the price of Du Pont shares. Seagram purchased 21.3% of Du Pont for $2.6 billion in 1981. After the purchase, the value of the Du Pont holdings fell by $1.1 billion. They have since regained $888 million of the loss, in turn pushing the value of the Bronfmans' Seagram holdings back up. Still, the Du Pont shares are carried on Seagram's books at a price higher than they would fetch today. A Bronfman spokesman complains, "I object to the suggestion that the price on any day matters to them. They are not going to sell and they are not going to buy."

H. Ross Perot, the super computer salesman from Texarkana, Texas, has only just climbed back from that historic April day in 1970 when the stock in the company he founded, Electronic Data Systems, dropped by $90 a share. Investors suddenly decided the stock was overpriced. The crew-cut, 5-foot 6-inch Perot personally lost $450 million—probably more than anyone has ever lost in a day. EDS President Morton H. Meyerson argues, though: "One doesn't suffer a loss if one doesn't sell the stock."

In each of the last five years, revenues, earnings, and earnings per share have all grown by more than 20%. On June 13 EDS closed at $41.75, finally passing the 1970 high (taking into account two intervening two-for-one splits). By July 1 the price had settled down to $36.125, but Perot's personal holdings have still climbed $412 million, to $597 million—more than three times their worth last fall. Over the years Perot has turned many of his shares over to a family trust, but he retains 16.6 million. If the trust and personal holdings are considered together, Perot is back to about where he was before the crash in 1970.

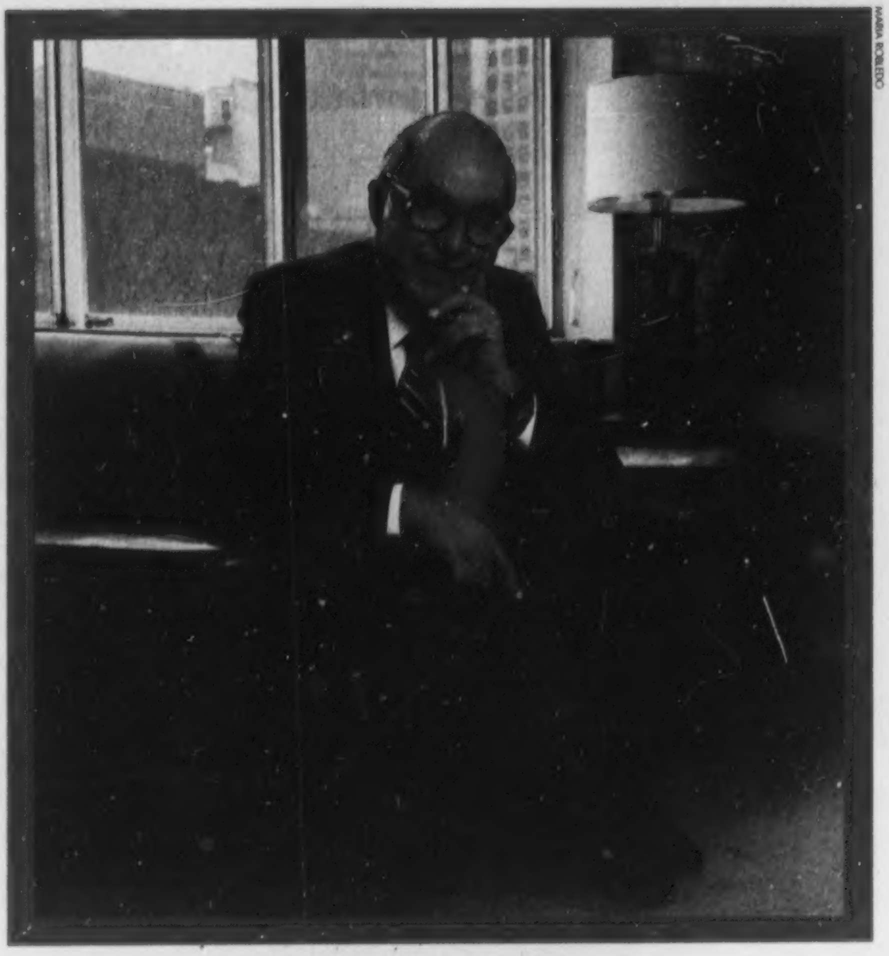
EDS, TeleVideo, and other electronics companies contributed the largest number of winners to FORTUNE's list, which isn't surprising since successful computer companies are growing so rapidly. Packard and Hewlett, both 70, have retired from active management but remain chairman and vice chairman of Hewlett-Packard. They founded the company with an investment of $538 in 1939, working in Packard's one-car garage in Palo Alto to produce an audio-oscillator invented by Hewlett. (Hwang made his first video display terminal in a California garage too.) Since then Hewlett-Packard has become an exemplary company, renowned for productivity, product quality, enlightened treatment of employees, and ability to keep dividends growing. The company, which makes measuring instruments, computers, and calculators, weathered the recent recession without one down quarter. It seems fitting that such a corporate paragon should produce two of the three top winners on FORTUNE's list. Hewlett-Packard stock has about doubled since last August, increasing Hewlett's holdings to $1 billion and Packard's to $2.1 billion. The two were equal owners until 1977, but then Hewlett, after his first wife died, sold one million shares to pay estate duties and put 1.8 million into a foundation.

Another fabulously successful computer company, Wang Labs, made its founder $357 million richer. An Wang, 63, came from Shanghai in 1945 to study at Harvard, and invented the magnetic core memory. He stayed on to develop a $1.2-billion-a-year business in office automation equipment. Just last month, Wang had to increase production of his small Professional computer from 300 to 800 a week to meet demand. Wang's 32-year-old son, Frederick, a senior vice president, gained $183 million.

Apple Computer, another product out of a California garage, handed a nice slice of the pie to two of its principals. Steven P. Jobs, the chairman, is the only centimillion-dollar winner under 30. His shares appreciated by $265 million. A. C. Markkula Jr., 40, the aged president, gained $222 million.

Publishing company shares perform particularly well in the early stages of a bull market, and many are still closely held by the founding families. Predictably, then, the Coxes (of Cox Communications), the Knights (Knight-Ridder), the Chandlers (Times Mirror Co.) and the Sulzbergers (New York Times Co.) were greatly favored in the last few months, though in the case of the Chandlers and the Sulzbergers no individual made enough to place on FORTUNE's list. The premier publishing beneficiaries of the bull market turned out to be the descendants of Clarence W. Barron, who bought Dow Jones & Co. in 1902 and ran it until his death in 1928. The family still holds an ample majority of the company's shares and takes a strong interest in its welfare.

The richest Barron heir is Jane B. Cook, 71, whose mother was adopted by Clarence Barron. For years Mrs. Cook was overshadowed on the board by her outspoken, horse-loving sister, Jessie Cox. But Jessie died last year at 73, and Jane has emerged as the strongest family member on the board. A private woman who lives quietly in Cohasset, Massachusetts, Mrs. Cook believes as strongly as her older sister that no outsider should interfere with or take over "grandfather's paper." The relationship is ideal for both management and owners. The manag-



MARIA ROBLEDO

$360 MILLION

David B. Shakarian

Founder, chief executive, General Nutrition

BEN WEAVER—CAMERA 5

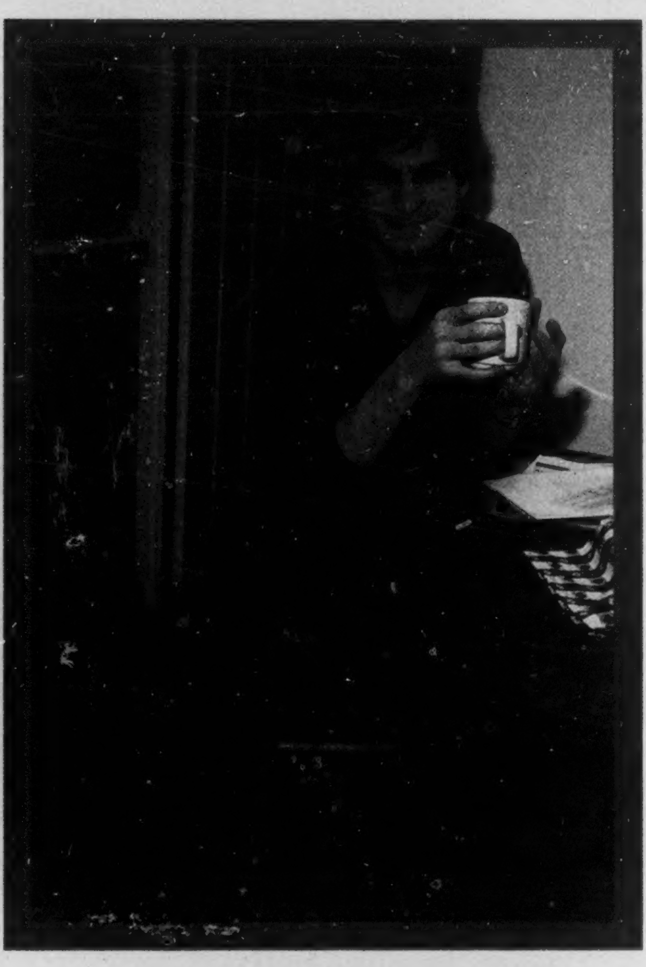
WE SELL FOR LESS
Guaranteed Quality at Di t Prices
PRESC IONS
114 9

$301 MILLION

Sam M. Walton

Co-founder, chief executive, Wal-Mart

DIANA WALKER



$265 MILLION

Steven P. Jobs

Co-founder, chairman, Apple Computer

ers pay the owners handsome dividends and the owners give the managers support without interference.

Like publishing, the retail business also furnished several winners, including two big ones whose names are hardly celebrated—David B. Shakarian, 69, chairman of General Nutrition Inc., and Leslie H. Wexner, 45, chairman of The Limited Inc., which owns hundreds of women's specialty apparel stores. Shakarian's holdings advanced $360 million and Wexner's $440 million.

Shakarian took almost four decades to reach these financial heights. He began selling a yogurt-like product in an old building in Pittsburgh in 1935. Not until the early 1960s, when Americans went gaga over health foods and fitness, did General Nutrition really begin to grow. Now Shakarian has 1,100 General Nutrition Centers in all states except Alaska selling mostly his own brand of products. The Shakarian family as a group controls about 82% of the stock, and Shakarian and his wife 59.5%.

Wexner's retail wealth came more quickly. Starting with a borrowed $5,000 in 1963, he established a chain that has grown to 500 women's specialty shops known as The Limited Stores, added some other smaller chains, and then last year more than doubled the size of his business by buying the Lane Bryant chain of stores for large women. Wexner is less than overwhelmed by what the stock market is telling him. "I can count," he says laconically, "but I am not too impressed by how the world values you from day to day. That's just one small measure of success."

Wexner is disconcerted, however, by the celebrity of wealth. "It limits relationships," he says, and "creates a separation that didn't exist before." He likes to go to Vail because he can walk around unrecognized in sweat shirt and old Levis. "If I did that at home in Columbus, people would see that as eccentric," he says. Wealth hasn't changed his life much. "I'm kind of a dull guy," he ruminates. He has endowed a chair at Ohio State University and bought himself a house in Florida. He is a bachelor.

The oil industry, hit by price cuts and a drop in demand, did not produce many winners. However, the heirs to J. Paul Getty shared in a paper profit of $820 million. As in Mitchell's case, the gain represents only a partial recovery from a low of $41.25 a share in 1982. Though the price had climbed a bit to $43.50 by last August and continued on up to $69.25 by July 1, Getty Oil shares were still one-third below their 1980 high. One reason for interest in the stock appears to be speculation about the trust set up in 1934 by J. Paul Getty. It is now worth $2.2 billion and controls 40% of the company's stock. Kurt H. Wulff, a Donaldson Lufkin & Jenrette security analyst, says Getty has the most undervalued stock among integrated domestic companies, and a rumored reorganization that would spin off some assets could both help investors diversify and increase the value of their holdings. J. Paul Getty's fourth son, Gordon, 49, became sole trustee last year and presumably has more freedom to reorganize than existed before.

How the Getty fortune will be distributed—or how its income is now shared—neither the company nor family lawyers will discuss. Although Gordon is the sole trustee, he presumably shares the benefits with the family. That would include his brother, Ronald, and the heirs of his brother, George, who died of an overdose of barbiturates and alcohol in 1973. Gordon's third brother, J. Paul Jr., would also be included, although his bohemian life in Europe made him something of the family's black sheep.

Only two of the 53 on the list can be described as portfolio investors. One is the secretive, hard-boiled Carl H. Lindner, 64, the high-leverage specialist who built a little family-owned dairy in Cincinnati into a huge financial conglomerate, American Financial Corp. Lindner, who controls 50.5% of American Financial, took the company private in 1981, so its stock is not quoted on any market. However, American Financial owns big chunks of at least 13 publicly traded companies, and Lindner's 50.5% share of the unrealized gains in the stock of these companies amounts to $222 million.

The other investor, Warren Buffett, was even more successful. He and his wife control 47% of Berkshire-Hathaway, originally a New England textile firm, and 13% of Blue Chip Stamps, which in turn is 60% owned by Berkshire-Hathaway. (The two companies are scheduled to merge this year. The Buffetts will own 45.3% of the new Berkshire.) In addition to operating their regular businesses, the two companies have, under Buffett, built an impressive portfolio of stocks, mostly in insurance, publishing, and consumer goods. Buffett doesn't jump in and out of stocks, but does seem to make the right moves at the right time.

"I never attempt to make money on the stock market," says Buffett. Lest this claim appear too preposterous for belief, he explains that his investment philosophy is to buy into good businesses rather than pick promising stocks. "I buy on the assumption that they could close the market the next day and not reopen it for five years," he says. Buffett absorbed this philosophy from the late Benjamin Graham, the renowned exponent of investing in fundamental values, who was his teacher in graduate school at Columbia University. After learning from Graham and working on Wall Street, Buffett returned to his native Omaha, which seems to provide a calm vantage point from which fundamentals can be discerned clearly amid the market's turmoil. He made his first million by the time he was 31.

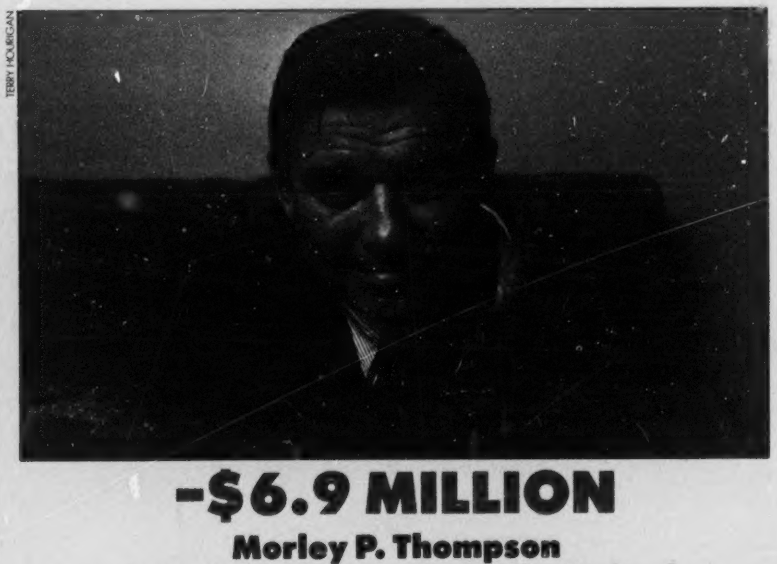
■ Except for a rarity such as Buffett, the big prizes in the stock market are reserved not for outside investors but for the entrepreneur who starts his own company, makes it successful, takes it public, retains a large share in it—and then ignores vast ebbs and flows in the value of his holdings. Still, elements of the big winners' strategy are available to any adventurous investor. One is to buy for the long term. The other is to concentrate on one or a few companies rather than diversify. All but six of the 53 investors on the list outperformed the New York Stock Exchange index. Concentration is a high-risk, but high-promise, posture. F

THE FEW WHO LOST

■ Even when the bulls are frolicking, somebody is sure to lose money on Wall Street. But the surge of the market was so strong this time that losers weren't easy to find. Even Texas Instruments' stock, which dropped $39.50 a share one day in June when the company forecast a second-quarter loss, was 47% higher on July 1 than before the bull market began. Two major corporations, however, handed their stockholders some spectacular losses.

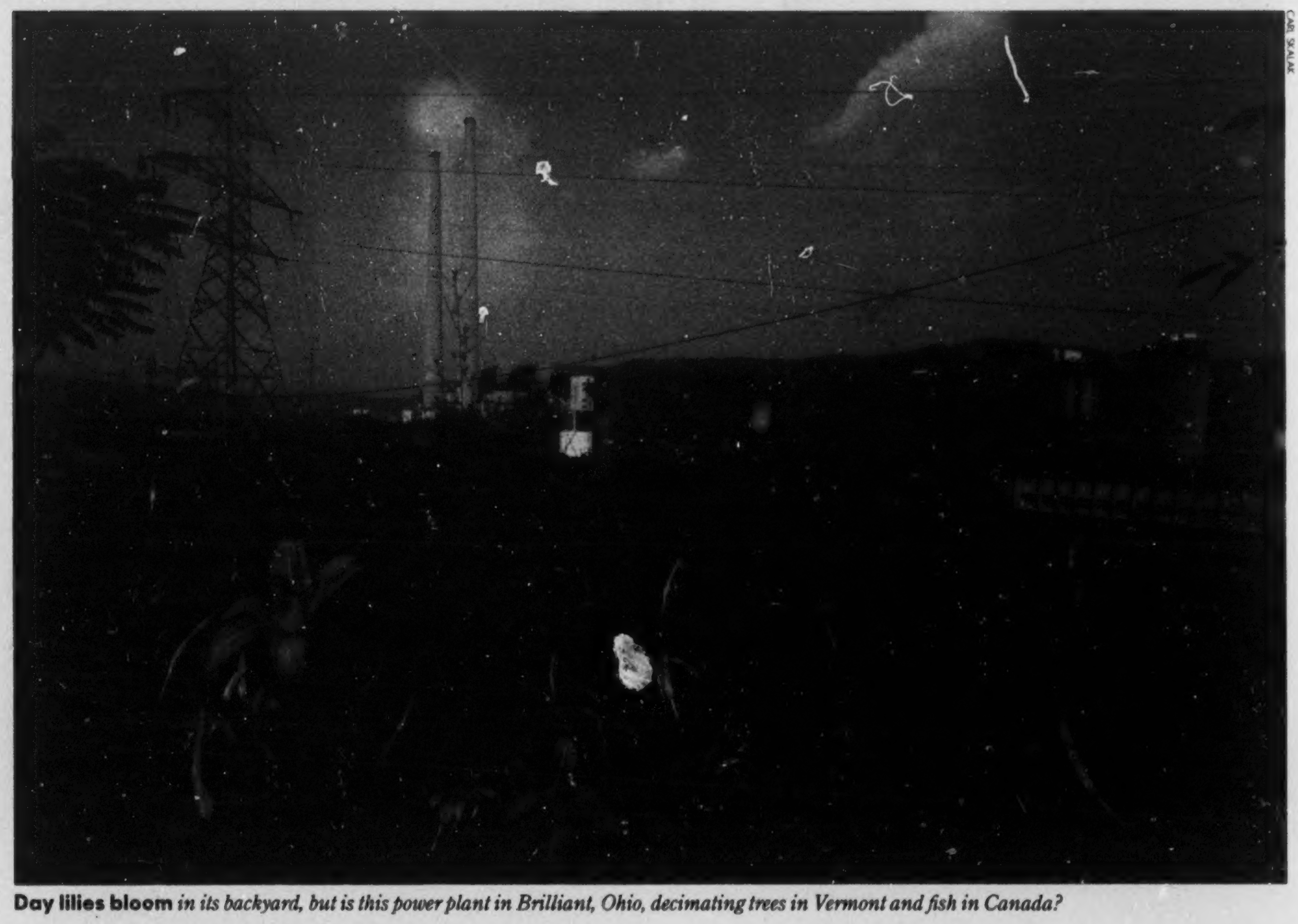
Warner Communications' shares were zapped by the troubles of the company's Atari subsidiary (see page 46). Warner Chairman Steven J. Ross and Executive Vice President Caesar P. Kimmel each lost over $4 million. But Warner's biggest loser was Jacob S. Liebowitz, 82, the founder of a comic book company that eventually came under Warner's wing, bringing Superman, Batman, and others in its train. Liebowitz lost $5.3 million.

Baldwin-United, the piano maker turned financial conglomerate, was a stock market sensation. Billionaire shipping magnate Daniel K. Ludwig once described Baldwin Chairman Morley P. Thompson, 56, as "the smartest man in America." But Thompson overborrowed to overacquire, and by July Baldwin was within a hair of bankruptcy. Having moved up from $24 on August 12 to a high of $50.625 in November, the stock declined to $8.625 when trading was suspended on June 29 for 12 days. Thompson, who went to work for Baldwin in 1950, is out of a job. Based on his holdings when he was ousted in May, he lost $6.9 million.


TERRY HOURIGAN

–$6.9 MILLION

Morley P. Thompson
Former chairman, Baldwin-United



CARL SKALAK

Day lilies bloom *in its backyard, but is this power plant in Brilliant, Ohio, decimating trees in Vermont and fish in Canada?*

REGULATION/MYRON MAGNET

HOW ACID RAIN MIGHT DAMPEN THE UTILITIES

■ Acid rain may fall on the just and the unjust alike, but on whom will the burden of ending it fall? Please Lord, cry electric utilities, oh please not on us. But while they watch politicians wind up to ever higher pitches of environmental rectitude as the New Hampshire primary draws nearer, utility executives have the sinking feeling they'd better get ready. In their heart of hearts, they're whispering, Oh please make that burden lighter than the billions it could be.

All the proposed solutions to acid rain would make electric companies in the 31 easternmost states do most of the cleaning up. Who will foot the bill, though, remains an open question—and a weighty one. Estimates of the total capital required for the job range from $6.2 billion to $35 billion, and another $2.2 billion to $12 billion could be tacked onto the utilities' annual operating expenses. The leading proposals would dump the whole amount on the electric companies, leaving them to parcel it out among their customers and shareholders.

How big a danger acid rain is no one really knows. Without doubt the sulfuric and nitric acid given off by fossil fuel combustion does drop out of the sky dissolved in rain or snow and does damage aquatic life. Some lakes in northeastern states and eastern Canada have lost whole species, even their entire populations, of fish and bugs, poisoned by aluminum sucked out of the surrounding soil by acid precipitation.

ENVIRONMENTALISTS, pointing to dying spruces on Vermont's Camel's Hump Mountain, say acid rain's to blame and argue that it might harm other vegetation as well. Some scientists worry that changes in soil chemistry caused by acid rain could be killing the bacteria that transform dead plants and animals into nitrogen and carbon. Without those bacteria, "everything ends up as a garbage heap," says William Nierenberg, director of the Scripps Institution of Oceanography and head of a White House panel to study acid rain. But whether acid rain really harms trees and bacteria is still unknown.

Nevertheless, Nierenberg's blue-ribbon panel of scientists declared in June that steps to curb acid rain are needed now, just in case. More than a few legislators had already reached the same conclusion, as a flurry of bills in both houses of Congress attests. Three Senate bills to amend the Clean Air Act differ chiefly in degree. All assert that there's too much sulfur and nitrogen oxide spewed into the air. Worse, the stuff gets blown up to 600 miles from the states that make it onto more fastidious areas downwind, even onto an indignant Canada.

What's needed, the Senate bills say, is to cut the sulfur dioxide emitted in the 31-state area that's affected by acid rain—now around 24 tons a year—by eight million to 12 million tons. A 12-million-ton reduction, environmentalists believe, would cut lake acidity in half, to a level where fish could flourish. Since utilities create most of the man-made sulfur dioxide—86% of it—they should clean it up, according to the bills' rationale. None of the bills mandates a reduction in oxides of nitrogen, responsible for 33% of the man-made component of acid rain. They're harder to reduce technically—and politically. Cars and trucks emit them, and new regulation would stir up powerful interests.

Acid rain poses a proven danger only in the Northeast, and no one knows exactly whence the region's acid comes. As a result, the proposed legislation requires utilities in all 31 states to cut emissions according to how much sulfur dioxide a state's utilities throw off per unit of electricity generated. Governors would allocate the reductions among their utilities. The costs would fall hardest on companies that burn high-sulfur coal, most of which are in the Ohio Valley.

Of the three ways to reduce sulfur dioxide emissions, two are relatively cheap and one requires major investment. Utilities can switch from high-sulfur eastern coal to the low-sulfur, lower-energy variety mostly found out West. But this, utility industry executives say, is harder than it sounds. It's not just that boilers are designed for a specific coal and that changing to a different variety might foul the furnace or require a new mechanism to feed fuel into it. Nor is it merely a question of having to break 20-year and 30-year contracts for coal. The real problem, industry spokesmen assert, is political. The electric companies most affected are in states that produce scads of high-sulfur coal, with elected officials and rate commissions sensitive to miners and their union. Pressure from the miners won them a clause in the Clean Air Act that allows governors to block utilities from switching to out-of-state coal.

Short of switching coal, utilities can wash what they've got. This entails crushing the coal and putting it in a water bath to clean out the sulfur-bearing rock—iron pyrites, or fool's gold—mixed up with it. The coal itself will float, while 20% to 30% of the sulfur will sink to the bottom. In theory, coal switching and coal washing can reduce emissions by five million tons. But technical difficulties and political obstacles, utility executives believe, could make two million or three million of those tons all but impossible to get.

That leaves scrubbers. These are towers, 60 to 100 feet high, that shower exhaust gases with ground lime or limestone mixed in water. The sulfur dioxide in the gas reacts with the lime to form a compound that drains into a tank at the bottom of the tower, leaving the "scrubbed" gas to billow out the chimney. If the resulting compound is calcium sulfate—gypsum—all is well; it can be dumped safely in landfills. But more often calcium sulf*ite* forms, and this glop, which remains forever the consistency of toothpaste unless it is expensively dried, is hard to dump. Since a typical power plant scrubber can turn out enough of this useless stuff in a year to cover a square mile one foot deep, scrubbers have a pollution problem all their own. But cost is the main drawback, and not just the capital cost of $100 million to $300 million per scrubber (about a third the price

RESEARCH ASSOCIATE *Joan W. Campo*

UTILITY	ESTIMATED ANNUAL COSTS OF REDUCING EMISSIONS		
	TOTAL (MILLIONS OF DOLLARS)	AS % OF COMPANY'S CASH FLOW	PER RESIDENTIAL CUSTOMER (DOLLARS)
AMERICAN ELECTRIC POWER	$818	104.6%	$265
THE SOUTHERN COMPANY	572	53.6%	180
DETROIT EDISON	342	85.7%	198
UNION ELECTRIC COMPANY	254	136.6%	285
FLORIDA POWER & LIGHT	223	39.8%	92
PUBLIC SERVICE INDIANA	198	158.4%	417
DOMINION RESOURCES	191	38.1%	91
TECO ENERGY	182	150.8%	442
WISCONSIN ELECTRIC POWER	162	69.7%	191
CINCINNATI GAS & ELECTRIC	151	103.2%	214
PENNSYLVANIA POWER & LIGHT	149	110.0%	39
ILLINOIS POWER COMPANY	146	83.9%	279
INDIANAPOLIS POWER & LIGHT	137	146.5%	394
DUKE POWER COMPANY	125	23.5%	96
CENTRAL ILLINOIS PUBLIC SERVICE	100	85.7%	290
WISCONSIN POWER & LIGHT	49	50.3%	183

Some Possible Costs of Mopping Up

The figures above, based on a survey by the Edison Electric Institute, the utility trade association, show how the mildest proposal for eliminating acid rain might affect power companies in 31 Eastern states. The estimated costs, which would begin in 1993, are stated in 1982 dollars. The middle column shows the costs as a percentage of each company's average cash flow over the last three years.

of a new coal-fired power plant). The scrubbers themselves eat up between 5% and 8% of a plant's total power output.

Technology improvements are imminent, though. A new boiler technology that promises to obviate the acid rain problem and make scrubbers obsolete is knocking at the door. Called fluidized bed combustion, this process suspends marble-sized bits of limestone and burning coal on a column of air blown in from the bottom of the boiler. When the sulfur dioxide that's produced combines with the marbles of limestone, it turns into easy-to-dump gypsum. The nitrogen oxides emitted are roughly half the present amount. At least three power companies will start building demonstration plants using this technology within the next couple of years.

Given present technology even the mildest of the Senate bills could clobber utility customers and shareholders. The bill would oblige utilities in the 31-state area to cut emissions by eight million tons a year by 1993. Hardest hit would be American Electric Power in Columbus, Ohio, the nation's largest investor-owned electric company. It would comply by shoehorning scrubbers into six generating plants, switching coal at two others, and prematurely retiring six. The company figures that the capital outlays would come to $5 billion, and annual costs, including depreciation and higher operating expenses, would total $818 million.

If all the costs were passed along to customers, AEP's rates would rise an average 18%. One of AEP's eight operating companies, Ohio Power, would need a 38% rate hike. An industry survey of 24 utilities found that they would need rate increases averaging 15.7% by the 1990s. (Projected costs and rate increases for 16 of the companies are shown in the table on the preceding page.)

WERE CONGRESS to mandate a ten-million- or 12-million-ton reduction in sulfur dioxide, the costs would leap upward, for each additional cut is harder and more expensive to achieve. If the required reduction is ten million tons instead of eight million, the capital cost could more than double; from eight million to 12 million tons, operating costs could double and capital costs triple.

As for the effect of all this on utility stock prices, financial analysts say it's too early to tell. It seems unlikely, though, that state regulators would allow utilities to load all the costs on customers. Some are bound to be left with the companies and their shareholders. A key issue affecting share prices would be the timing of rate increases. Companies whose regulators would let them include a portion of their construction costs as they were incurred would fare better than ones that had to wait till the equipment was in service before starting to recover the expenses.

For now, the stock market seems untroubled by the specter of acid rain legislation. "There are psychological issues that haven't moved the stocks yet," says Margery Obrentz, a security analyst at Kidder Peabody & Co., "but as Congress gets more serious about this, we expect the stocks to move a little."

Perhaps the market is so untroubled because no one really expects Congress to slap an unproductive $10-billion or $20-billion capital expense on the utility industry. Not that acid rain legislation won't pass; it probably will. But sentiment is strong against saddling one industry or region with the whole cost, especially since smelters, steel mills, auto plants, and home furnaces all contribute to the acid brew. So it may well be that one of several spread-the-cost schemes under consideration will shift the burden at least partially off utility shoulders.

continued

The Goodyear Tire & Rubber Company

through a wholly owned subsidiary
has acquired by merger

Celeron Corporation

The undersigned acted as financial advisor to
The Goodyear Tire & Rubber Company.

Dillon, Read & Co. Inc.

June 21, 1983

A BILL PUT FORTH by Democratic Congressman Henry Waxman of California is the most visible of these plans. He envisions a kind of superfund, raised by a one mil (0.1 cent) tax on each kilowatt of electricity sold in the 48 contiguous states. Only nuclear power would be exempt, since its generation doesn't contribute to acid rain. The $2 billion a year raised by this tax, costing consumers a 3.5% to 4% hike in their electricity bills, would be used to buy scrubbers or other equipment necessary to clean up 50 large emitters of sulfur dioxide and nitrogen oxides. (Waxman's bill doesn't make clear whether the recipients would be allowed to depreciate the equipment—taking a bite out of taxpayers after first taking one out of electricity users.) Seven million of the ten-million-ton sulfur dioxide reduction the bill envisions would result from these measures; the rest of the burden would fall on utilities.

Other spread-the-cost measures include a tax credit for the acid rain costs utilities pass through in electric bills or, alternatively, a nationwide electricity surcharge that would be somewhat higher in states with hefty emissions. Utilities favor a tax on all fossil fuels, including gasoline, since cars are to blame for 44% of the nitrogen oxides emitted.

S. Fred Singer, a senior fellow at the Heritage Foundation and a member of the White House panel studying acid rain, has come up with a quite different suggestion for allocating the costs: let government set the total amount of allowable emissions in the 31-state area and then sell or give away the right to spew out a portion of that total to current polluters. The polluters could resell the rights if they wanted. Companies that could cut emissions most cheaply would do so and cash in on their emission rights by selling them to others whose cleanup costs were higher, assuring by this market process a least-cost solution that the political process can't achieve.

Quite apart from how the costs should be allocated is the question of how great those costs should be. Prior to the Clean Air Act of 1970, air pollution was a manifest danger to the public health, and hardly anyone doubts that a substantial fraction of the enormous amount expended to make the air cleaner was justifiably spent. But if acid rain turns out not to be a killer of trees and soil bacteria, differences will rage over how much it is worth to save just the fish and insects in the thousands of Adirondack, New England, and Canadian lakes that unquestionably are affected. "Are those fish worth up to $5 a pound?" asks economist Hoff Stauffer of ICF Inc., a Washington consulting firm that has studied acid rain for both the Edison Electric Institute and the National Wildlife Federation. "If it turned out it'd cost $5,000 a pound, why that's just not worth it."

In the next month or two William Ruckelshaus, director of the Environmental Protection Agency, will announce his own plan for neutralizing acid rain. A recent speech suggests he'll favor a phased reduction, sensibly taking the relatively cheap steps first and monitoring the results before proceeding further. In the meantime, the research on how serious acid rain is, and where the most critical sources of it are, will go on.

■ Business needs to monitor the acid rain debate closely, for if the cleanup cost goes higher than what's essential, that's bad news for more than just utilities. Whatever is done will drive up the price of electricity, a key production cost for almost all manufacturing, and especially for the heavy industries of the Midwest, where the mopping up will be the most expensive.

Southern Pacific Company

has sold its wholly owned subsidiaries

Southern Pacific Communications Company
and
Southern Pacific Satellite Company

to

GTE Corporation

MORGAN STANLEY & CO.
Incorporated

June 21, 1983

Southern Pacific Company, one of the country's largest transportation and financial services organizations, with extensive real estate and natural resource holdings, has sold its microwave and satellite communications subsidiaries to GTE Corporation for $740 million in cash (before expenses of the sale).

Morgan Stanley served as financial advisor to Southern Pacific Company in this transaction. Morgan Stanley reviewed strategic alternatives available to Southern Pacific Company, participated in the negotiation of the terms and structure of the transaction, and assisted with the closing of the transaction.

THE 50 LEADING EXPORTERS

THE FORTUNE DIRECTORY OF THE LARGEST U.S. INDUSTRIAL EXPORTERS

■ Foreign sales of U.S. products felt the punishing effects of a rising dollar in 1982, and after three years atop FORTUNE's list of leading exporters, Boeing fell from its perch. Though the prices of American industrial exports increased only 4.2% on average, the dollar soared 16% against a basket of 22 major currencies, following a 14% gain in 1981. With their wares far more expensive to foreign buyers and the world economy in a slump, the top 50 exporters suffered a 6.8% decline in foreign sales, to $59 billion. The dismal trend promises to continue right into 1984.

General Motors, the new No. 1, didn't so much rise to the top spot in 1982 as fall into it. The auto giant's export sales—including big cars for the Middle East and components for auto assembly plants in Canada, Mexico, and Venezuela—decreased by 18%, against 36% for Boeing. General Electric moved up to the No. 2 spot despite a 10% decline in its exports. Besides aircraft engines, which it sells worldwide, GE's 1982 shipments included gas turbines to Saudi Arabia and locomotives to Indonesia.

Boeing's doldrums were shared by most of the other aircraft and aircraft engine manufacturers on FORTUNE's list. Export revenues fell 21% for the seven aviation industry repeaters from last year's lineup. Northrop, whose F-5 fighter has been a hit with foreign governments, was the only trend bucker; its exports rose 15%. The biggest loser of all, though, was poor International Harvester, which dropped from No. 16 on the list to No. 40. Harvester's shipments abroad plummeted 51%.

Cruel as it was for some of the top 50, 1982 was just as hard on lots of medium-size and small exporters. All together, sales of U.S. merchandise abroad—counting farm goods as well as military hardware—were down 9.1%, to $223 billion. And with imports declining less than exports, the U.S. trade deficit widened to $43 billion.

Looking at the few bright spots, the demand for American technology has been holding up. Five of the seven manufacturers of computers and electronic components that were also on last year's list of major exporters showed gains in 1982, with a combined increase of 7%. Of this year's six newcomers, three are high-tech firms: Motorola, a big exporter of two-way radio equipment and semiconductors; Harris, whose foreign sales include satellite communications equipment and high-performance minicomputers; and Burroughs, the computer manufacturer. Philip Morris did well too, rising from No. 22 to No. 14 with the help of brisker cigarette sales in the Far East.

The biggest gainer last year was Occidental Petroleum, whose exports leaped 58% with a mighty assist from the Soviet Union. The bulk of Occidental's foreign trade is in fertilizer, whose market collapsed last year. Farmers can defer purchases in bad years, as they generally did with a vengeance. But Occidental more than made up for this with heavy shipments of superphosphoric acid fertilizer to the U.S.S.R. under a huge, 20-year contract landed by Chairman Armand Hammer in 1974.

Occidental's gains came as other U.S. companies were hurt by restrictions on Soviet trade, in particular President Reagan's embargo on equipment for the Siberian gas pipeline. Caterpillar Tractor, for example, lost a $90-million contract for pipelaying equipment and probably a great deal more in orders not placed. Even businesses that had nothing to do with the pipeline worry that foreigners no longer perceive Americans as reliable trading partners and are beginning to look elsewhere.

Congress is grappling with this concern as it considers amendments to the Export Administration Act of 1979. One proposed amendment likely to become law is a sanctity-of-contract provision, which would allow companies to fulfill the terms of existing contracts if new embargoes are imposed.

The main inhibitors of exports, though, remain the strong dollar and the sluggish worldwide economy. The dollar could weaken, but Secretary of Commerce Malcolm Baldrige says orders and shipments would still take a while to pick up. "Even if the dollar falls later this year," he declares, "we can't expect to see any improvement in exports until late 1984." For America's leading exporters, things will get worse before they get better. —ANDREW KUPFER

RANK		COMPANY	PRODUCTS	EXPORTS	FORTUNE 500		EXPORTS AS PERCENT OF SALES	
'82	'81			$000	SALES $000	RANK	PERCENT	RANK
1	2	**General Motors** (Detroit)	Motor vehicles and parts, locomotives, diesel engines	4,673,800	60,025,600	2	7.79	39
2	3	**General Electric** (Fairfield, Conn.)	Aircraft engines, generating equipment, locomotives	3,921,000	26,500,000	11	14.80	22
3	1	**Boeing** (Seattle)	Aircraft	3,879,000	9,035,000	34	42.93	1
4	4	**Ford Motor** (Dearborn, Mich.)	Motor vehicles and parts	3,733,000	37,067,200	5	10.07	38
5	5	**Caterpillar Tractor** (Peoria, Ill.)	Construction equipment, engines	2,619,000	6,469,000	45	40.49	2
6	7	**E.I. du Pont de Nemours** (Wilmington, Del.)	Chemicals, fibers, polymer products, petroleum, coal	2,559,000	33,331,000	8	7.68	41
7	8	**United Technologies** (Hartford)	Aircraft engines, helicopters	2,271,721	13,577,129	20	16.73	17
8	6	**McDonnell Douglas** (St. Louis)	Aircraft, missiles, space systems	2,076,500	7,331,300	43	28.32	4
9	9	**International Business Machines** (Armonk, N.Y.)	Information-handling systems, equipment, and parts	1,875,000	34,364,000	6	5.46	45
10	10	**Eastman Kodak** (Rochester, N.Y.)	Photographic equipment and supplies	1,853,000	10,815,000	26	17.13	16
11	•	**Chrysler** (Highland Park, Mich.)	Motor vehicles and parts	1,795,900	10,044,900	29	17.88	14
12	11	**Westinghouse Electric** (Pittsburgh)	Generating equipment, defense systems	1,356,700	9,745,400	31	13.92	24
13	23	**Occidental Petroleum** (Los Angeles)	Agricultural chemical products, coal	1,205,000	18,212,226	15	6.62	44
14	22	**Philip Morris** (New York)	Tobacco products	1,142,000	9,101,600	32	12.55	29
15	17	**Hewlett-Packard** (Palo Alto, Calif.)	Computers, electronic equipment	1,083,000	4,254,000	81	25.46	5
16	12	**Signal Companies** (La Jolla, Calif.)	Trucks, engines, chemicals, audio-video systems	1,075,400	4,935,600	69	21.79	10
17	14	**Union Carbide** (Danbury, Conn.)	Chemicals, plastics	979,000	9,061,500	33	10.80	34
18	18	**Weyerhaeuser** (Tacoma, Wash.)	Pulp, logs, lumber, wood products, newsprint	924,000	4,186,224	82	22.07	9
19	13	**Raytheon** (Lexington, Mass.)	Defense electronic systems, aircraft	917,000	5,513,370	58	16.63	18
20	20	**Archer Daniels Midland** (Decatur, Ill.)	Soybean meal and oil, wheat, corn	876,000	3,712,977	102	23.59	7
21	15	**Monsanto** (St. Louis)	Herbicides, chemicals, polymer products, fibers	864,000	6,325,000	47	13.66	26
22	•	**General Dynamics** (St. Louis)	Tanks, aircraft, missiles, gun systems	852,900	6,352,600	46	13.43	27
23	21	**Exxon** (New York)	Petroleum, chemicals	831,000	97,172,523	1	0.86	49
24	19	**Dow Chemical** (Midland, Mich.)	Chemicals, plastics, magnesium metal	826,000	10,618,000	27	7.78	40
25	25	**Northrop** (Los Angeles)	Aircraft, electronic equipment, related support services	823,700	2,472,900	158	33.31	3
26	•	**International Telephone & Telegraph** (New York)	Logs, cellulose pulp	816,000	15,958,440	16	5.11	46
27	•	**Motorola** (Schaumburg, Ill.)	Radio communications systems, semiconductors	814,966	3,785,847	98	21.53	11
28	27	**Dresser Industries** (Dallas)	Oil-field and industrial equipment	733,700	4,160,600	83	17.63	15
29	29	**Digital Equipment** (Maynard, Mass.)	Computer systems and equipment	722,866	3,880,771	95	18.63	13
30	31	**FMC** (Chicago)	Industrial and farm equipment	667,132	3,498,792	111	19.07	12
31	28	**Deere** (Moline, Ill.)	Farm and industrial equipment	630,000	4,608,226	75	13.67	25
32	26	**Lockheed** (Burbank, Calif.)	Aircraft and related support services	622,000	5,613,000	56	11.08	32
33	24	**Ingersoll-Rand** (Woodcliff Lake, N.J.)	Drills, compressors, pumps, bearings, tools	617,400	2,774,725	144	22.25	8
34	37	**Sperry** (New York)	Computer systems and equipment	591,400	5,571,400	57	10.61	35
35	33	**Phillips Petroleum** (Bartlesville, Okla.)	Petrochemicals, natural gas	580,000	15,698,000	17	3.69	48
36	36	**Rockwell International** (Pittsburgh)	Aerospace, electronic, automotive, industrial equipment	519,000	7,395,400	42	7.02	43
37	39	**Aluminum Co. of America** (Pittsburgh)	Aluminum	517,800	4,647,600	74	11.14	31
38	45	**Minnesota Mining & Manufacturing** (St. Paul)	Health-care, industrial, graphics, electronics products	505,000	6,601,000	44	7.65	42
39	30	**Celanese** (New York)	Fibers, chemicals	494,000	3,062,000	126	16.13	19
40	16	**International Harvester** (Chicago)	Construction and farm equipment, trucks	493,000	4,725,057	73	10.43	36
41	32	**Mobil** (New York)	Petroleum, chemicals	474,000	59,946,000	3	0.79	50
42	50	**Emerson Electric** (St. Louis)	Electronic components	459,600	3,502,327	110	13.12	28
43	35	**Textron** (Providence)	Helicopters and other aerospace products	456,000	2,936,000	136	15.53	20
44	34	**R.J. Reynolds Industries** (Winston-Salem, N.C.)	Tobacco products	440,000	10,906,000	25	4.03	47
45	43	**International Paper** (New York)	Pulp, paper, and wood products	438,000	4,015,200	91	10.91	33
46	42	**Kaiser Aluminum & Chemical** (Oakland, Calif.)	Aluminum	436,500	2,911,500	138	14.99	21
47	44	**Combustion Engineering** (Stamford, Conn.)	Oil-field and industrial equipment	432,320	3,569,817	105	12.11	30
48	•	**Harris** (Melbourne, Fla.)	Communications and information-processing equipment	423,800	1,719,028	199	24.65	6
49	•	**Burroughs** (Detroit)	Data-processing and business equipment	417,956	4,095,291	85	10.21	37
50	40	**American Motors** (Southfield, Mich.)	Motor vehicles and parts	416,355	2,878,416	139	14.46	23
		TOTALS		**58,731,416**	**628,684,486**			

• Not on last year's list.

AUGUST 22, 1983

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WITH AUTO SALES REBOUNDING
WILL SUCCESS SPOIL GENERAL MOTORS?

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HOW REAGAN BECAME A BIG SPENDER

EMBATTLED KODAK ENTERS THE ELECTRONIC AGE

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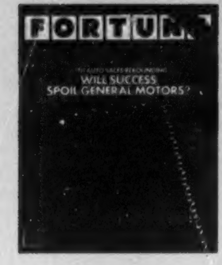

As the cover photograph by Adam Bartos suggests, customers may have a hard time distinguishing versions of the A car produced by various General Motors divisions. For more on product blur and other challenges facing GM, see page 94.

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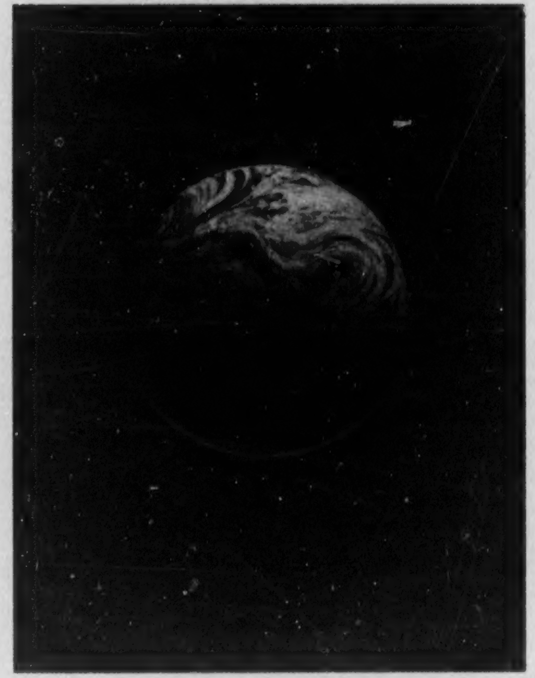
TURNS FOR THE BETTER AT HOME AND ABROAD



■ After two years of meager growth and then one of decline, the world economy has shifted into a recovery. That's the good news. So far, though, the upturn is flawed and spotty. In the following 38 pages, FORTUNE examines various aspects of the global economy, looking both backward and forward. Six pages of charts beginning overleaf etch the recovery's dimensions and compare them with past performances. FORTUNE's directories of the world's largest industrial corporations and the 500 largest outside the U.S. (page 170) measure performance in the unforgiving business climate of 1982. The directory of the 100 largest banks outside the U.S. (page 184) reports a surprising departure from the top ten and some surprising arrivals. Separate accompaniments scrutinize the mystery of the $100-billion gap in the world's current accounts (page 154) and provide a glimpse of the gnomes of Switzerland in their native habitat (page 158).

ILLUSTRATION BY BARRETT ROOT

THE WORLD ECONOMY/PERSPECTIVES

UNMISTAKABLE

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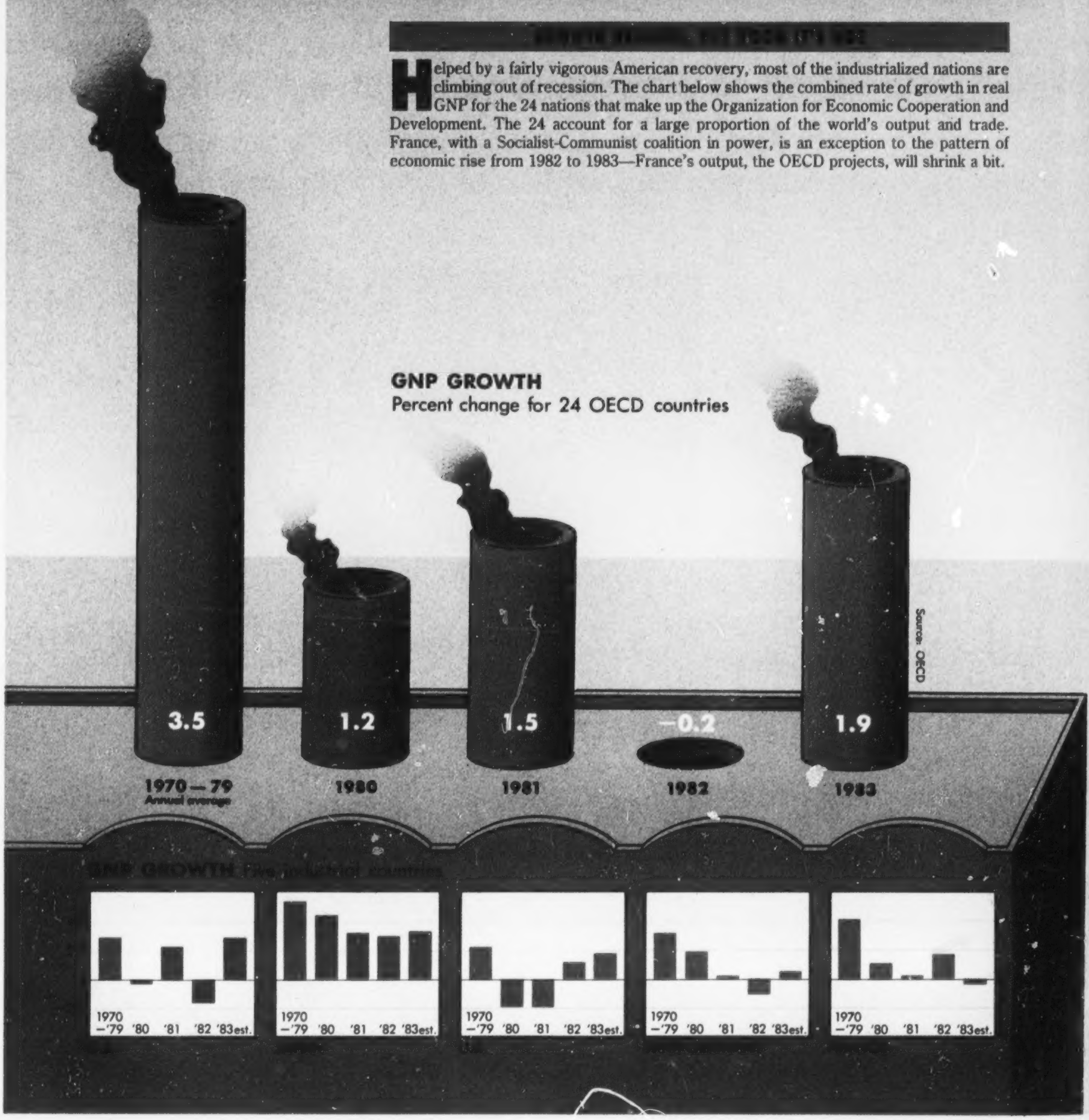
Helped by a fairly vigorous American recovery, most of the industrialized nations are climbing out of recession. The chart below shows the combined rate of growth in real GNP for the 24 nations that make up the Organization for Economic Cooperation and Development. The 24 account for a large proportion of the world's output and trade. France, with a Socialist-Communist coalition in power, is an exception to the pattern of economic rise from 1982 to 1983—France's output, the OECD projects, will shrink a bit.

GNP GROWTH
Percent change for 24 OECD countries



Source: OECD

ILLUSTRATIONS BY GUY BILLOUT

SIGNS OF LIFE

■ Global recovery is under way, but as the charts on these six pages illustrate, the picture is a mix of cheery and dreary. On the cheery side, GNP growth is resuming in the developed nations. Inflation, which looked so menacing and so intractable only a few years ago, is receding. Strength in major stock markets testifies to renewed confidence.

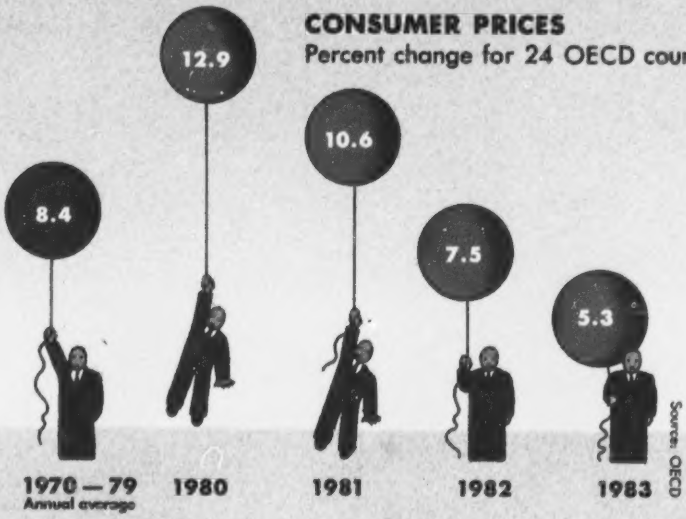
Not all the injuries of the long recession have mended, however. World trade, vital to the health of nations, is still running below its 1980 mark. Interest rates remain punishingly high, retarding business investment as well as housing. Unemployment persists at painful levels, and in some countries it will undoubtedly continue to creep up despite recovery in output. Excessive indebtedness among Third World countries threatens the solvency of some big banks. The strength of the dollar against other important currencies has helped bring on huge American trade deficits as well as repeated complaints from abroad.

The recovery in GNP growth, welcome as it will be, will at best fall short of the kind of growth that prevailed in the industrial world before the 1973 oil shock. Those good old days, it seems, will not be returning anytime soon.

—DAVID B. TINNIN

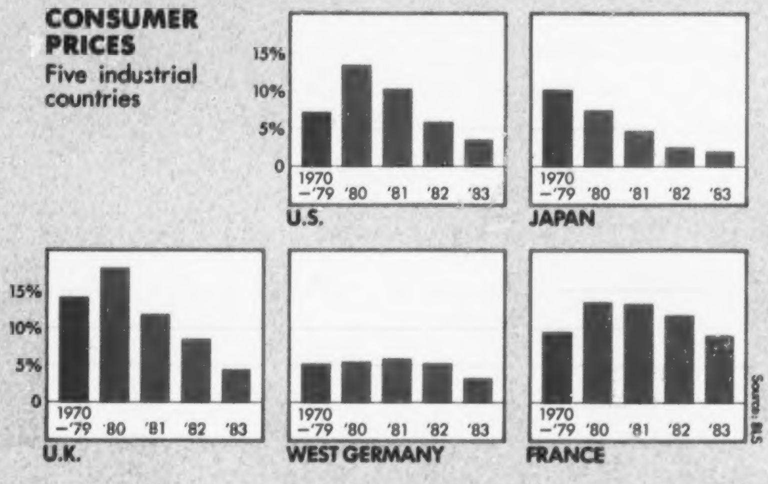
[illegible]

The most pleasant trend in the world economy in the past few years has been the winding down of inflation. Happily, the retreat continues. The overall inflation rate for the 24 OECD countries in the first half of this year comes to 5.3%, almost comfortable compared with the double digits of 1980-81 and well below the annual average of 8.4% during the Seventies. In all cases, chart data for 1983 inflation are not projections; they are annual rates based on actual figures for the first several months of the year.



CONSUMER PRICES
Percent change for 24 OECD countries

Source: OECD

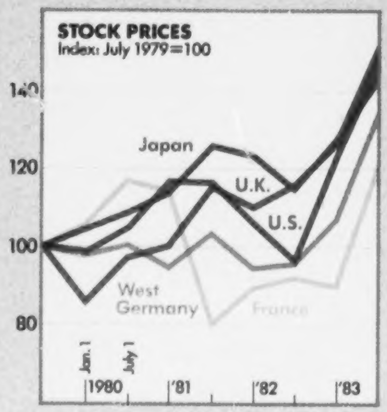


CONSUMER PRICES
Five industrial countries

Source: BLS

[illegible]

Stock markets proved once again to be sensitive and reliable leading indicators of economic recovery. In 1980, 1981, and the first half of 1982, prices on the principal exchanges in these five countries bounced around, sometimes in divergent directions. Then prices on the five exchanges got into step and began climbing steeply in a flock. The international stock market upsurge, it seems clear, reflected strengthening expectations among investors that at long last an economic recovery was on the way. To some extent, the prophecy was self-fulfilling, because the performance of the markets created liquidity and confidence.



STOCK PRICES
Index: July 1979=100

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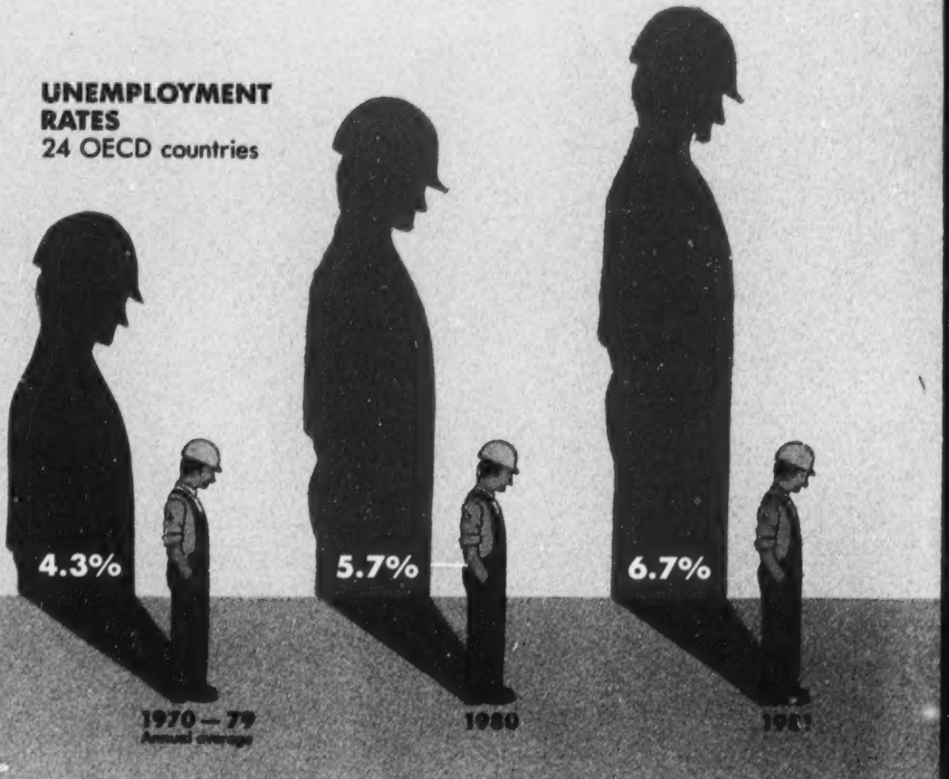
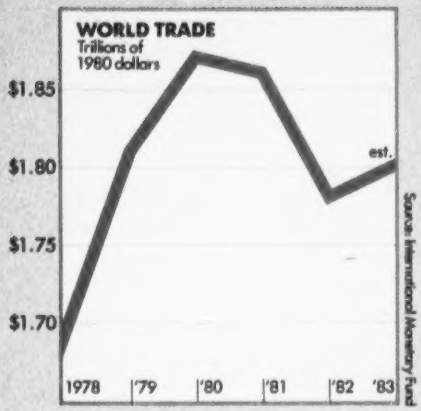
World trade—that engine of global prosperity—rose steadily, year after year, through the Fifties, Sixties, and Seventies. Over that stretch of time, world trade expanded 2,300% *in real terms.* Then, in the early Eighties, came a troublesome slump. The volume of trade—here measured by exports in constant dollars—is expected to turn up slightly this year and rally strongly in 1984. But much harm has been done. Shrinkage of exports worsened the financial plight of poor countries and intensified the protectionist urge in industrialized countries scrambling for markets and trying to protect jobs at home.

[illegible]

The dreariest aspect of the economic scene in the industrialized countries is the relentless growth of unemployment so far in the Eighties. Despite the recovery in GNP growth, this year has brought a worsening. Unemployment for the OECD nations together rose to 9.2%, more than double the average during the Seventies. (As in the inflation charts, the 1983 data are based on actual figures for the first several months of the year.) In the U.S., the recovery led to the hiring of some 1.7 million workers in the first half of this year, reversing the country's three-year trend of rising joblessness. Europe's unemployment problems are even more stubborn. Too many of Europe's plants are uncompetitive in the world market. Also, heavy payroll taxes to help pay for Europe's elaborate social welfare benefits make labor so expensive that managers are pushing automation. Unemployment has not yet become a disruptive political issue in Europe—but watch out if Europeans, as the OECD projects, continue to lose jobs.



UNEMPLOYMENT RATES
24 OECD countries



Source: International Monetary Fund

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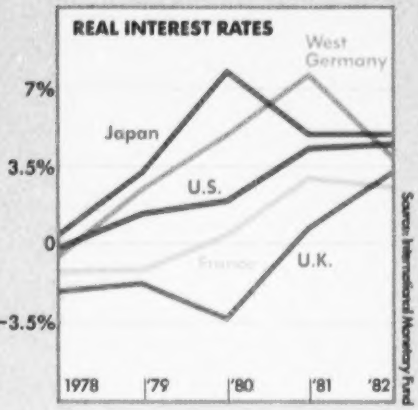
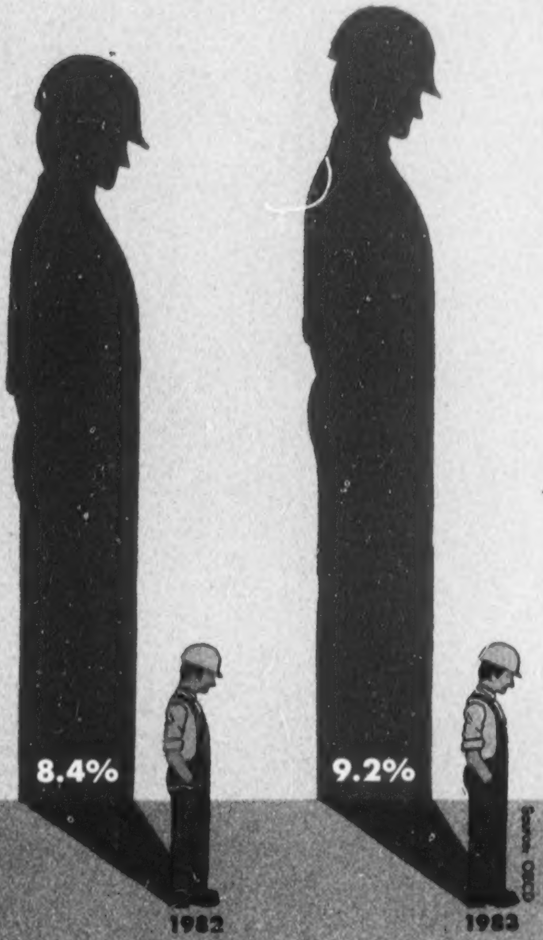
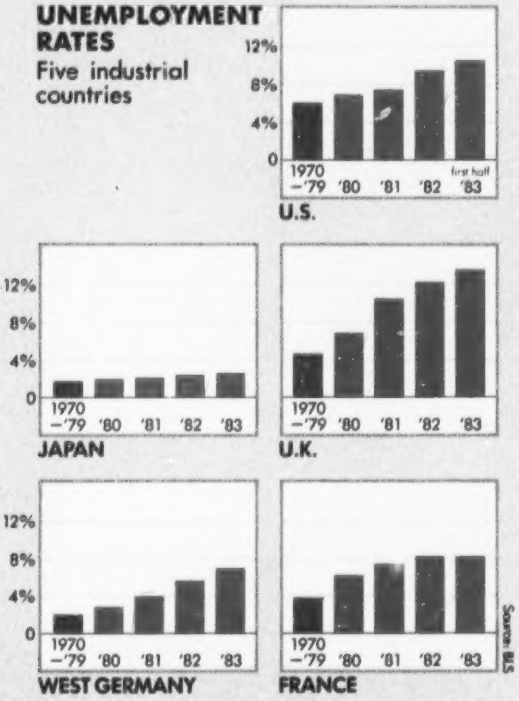
High interest rates have remained lofty despite the easing of inflation. As a result, real interest rates—interest over and above inflation—are now extraordinarily high. (The chart shows rates on 90-day instruments.) Only five years ago real interest rates were actually negative in the U.S., West Germany, the U.K., and France—good for borrowers, bad for lenders. Now money has become an expensive commodity, exacting a premium of nearly 5% in Japan and only a little less in the U.S. While this encourages saving, it discourages investment and increases the interest burden on hard-pressed debtor nations.



Source: International Monetary Fund



Source: OECD

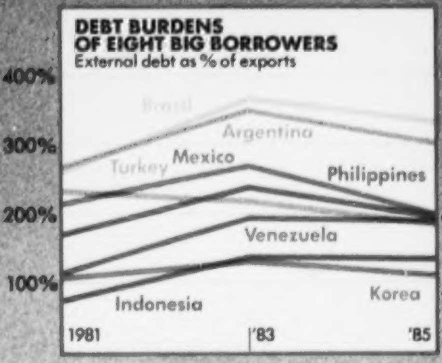


UNEMPLOYMENT RATES
Five industrial countries

Source: BLS

[illegible]

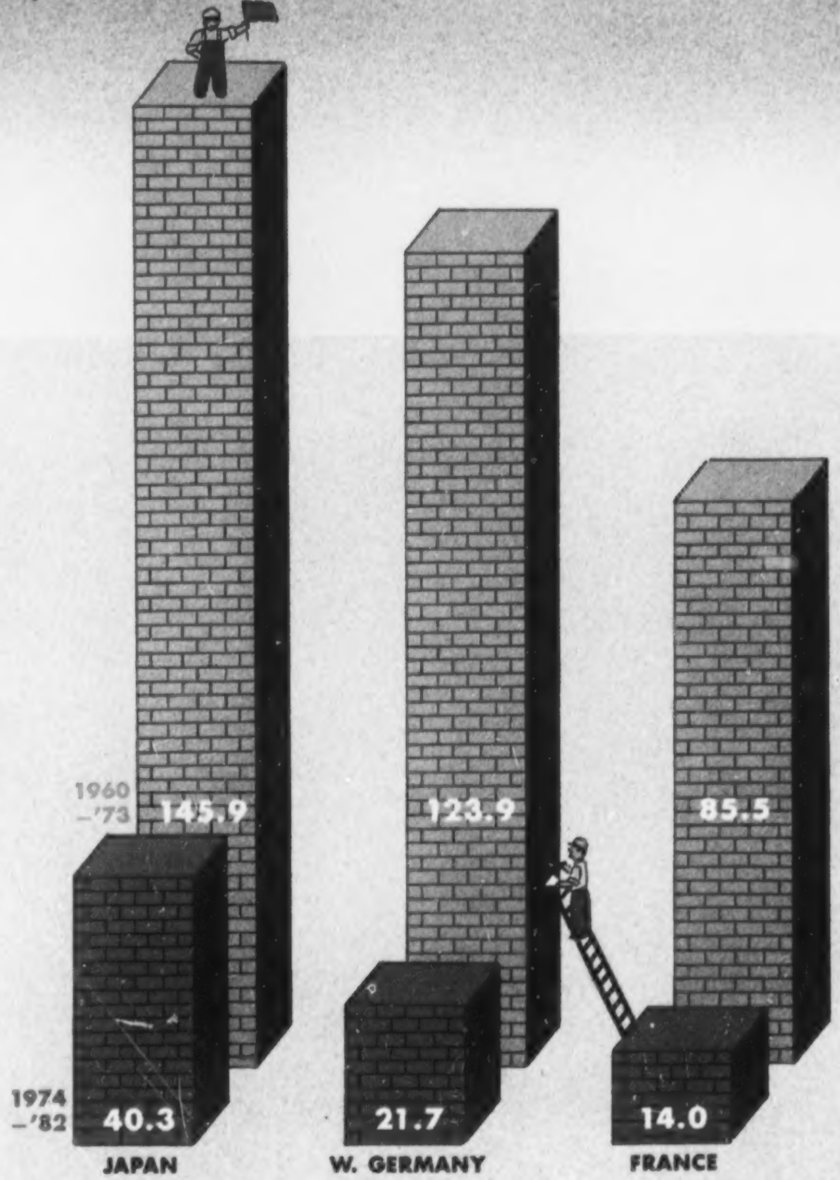
Developing countries went on a credit binge in the Seventies, and it continued into the Eighties. By the end of 1982, a score of developing countries had borrowed more than $500 billion from foreign banks and governments. Nearly $200 billion is currently owed to American banks. In a macabre dance of debt, the U.S. financial community has become hostage to its debtors, with banks in so deep they cannot afford to let a big borrower go under. The loans that nine U.S. money-center banks have extended to the three biggest debtors—Brazil, Mexico, and Argentina—add up to more than 100% of the banks' capital and reserves. Brazil, the biggest borrower of all, owes over $90 billion all together, close to 400% of its annual exports. Brazil will be lucky if it can pay interest on its debt, let alone pay down principal. As the chart indicates, Morgan Guaranty Trust, the source of the data, projects only modest declines in the debtors' burdens between now and 1985. Some developing countries are threatening to unite in a debtors' OPEC that would declare a moratorium on loan payments to set the stage for renegotiations to stretch out payment schedules and reduce interest rates—a bleak prospect for the lenders.



Source: Morgan Guaranty Trust Co.

THE GRAND FIZZLE

Just about everyone is aware that the industrialized world's economic performance declined after the early Seventies, but the passage of time has dimmed awareness of how bad the decline has been. The contrast between those two rows of brick towers tells the sad story. What the towers represent is overall economic performance according to an index devised by the New York Stock Exchange. To measure performance, exchange economists divided each nation's rate of real GNP growth by the sum of its inflation and unemployment rates. The resulting ratios were small numbers, less than 1.0 in most cases, and to make them handier they were multiplied by 100. The figures on the towers were calculated by the NYSE; they represent yearly averages for each period. The exercise demonstrates a truly dramatic falling off from 1960-73 to 1974-82 for all eight countries scrutinized. Japan's performance in 1974-82 actually fell short of the U.K.'s in 1960-73. Economically, these two time periods are two different worlds.



Research for charts: Lorraine Carson

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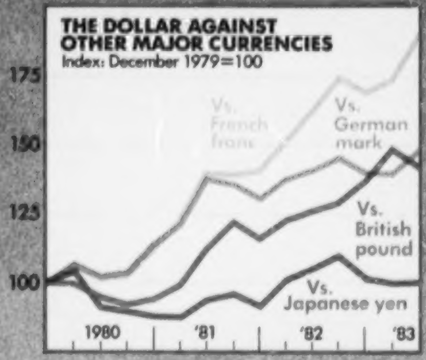
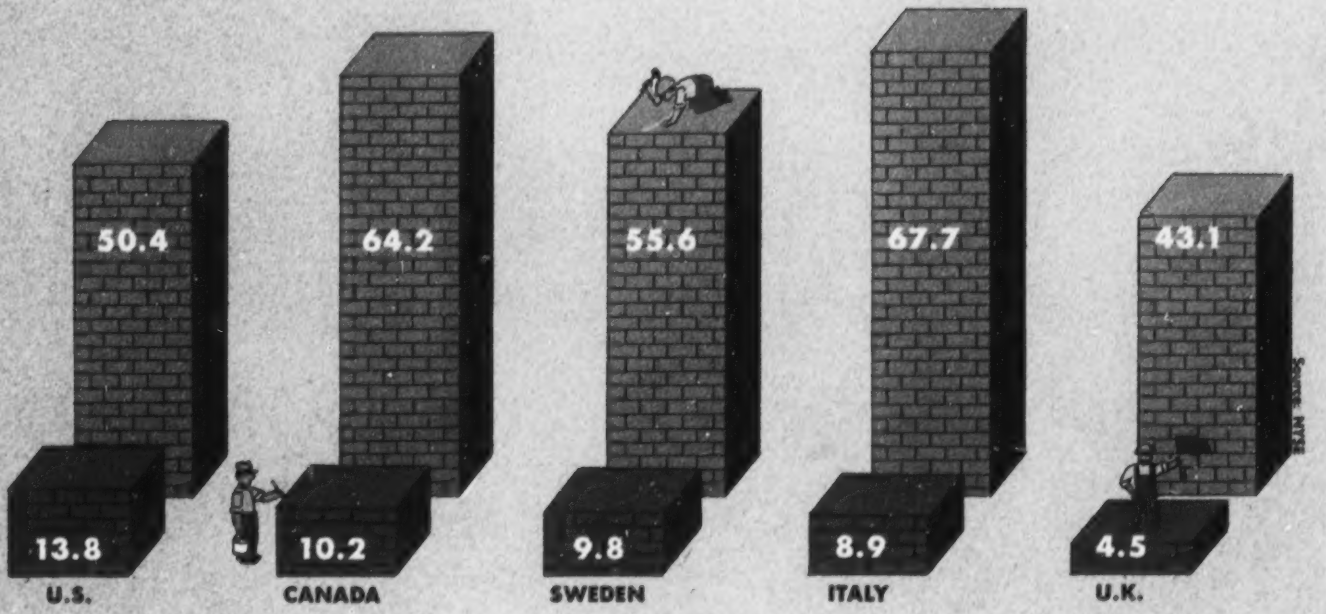
Even French economic periodicals concede *Le Dollar est Roi*—the dollar is king—and well they might after the trashing of the franc in the past few years. The dollar has also gained substantially in value against the pound and the mark and even—measured from late 1980 or early 1981—the yen. The strong dollar hurts the U.S. trade balance: it makes imports cheap in dollars and American exports expensive in other currencies. Many governments that berated the Carter Administration for its weak dollar now scold the Reagan Administration for a strong one, because it raises the costs of their major imports, notably petroleum and other commodities that are priced in dollars. Many Europeans contend the dollar is overvalued, perhaps by as much as 20%. But economists at Morgan Guaranty Trust believe that for manufactured goods the overvaluation amounts to much less than 20%. More surprisingly, they say that it benefits the U.S. Their argument: overvaluation forces American companies to manage their resources more prudently, sell their wares abroad more aggressively, and abandon old-technology industries that they should have given up on years ago. ◆



NEW YORK STOCK EXCHANGE ECONOMIC PERFORMANCE INDEX



Source: NYSE

THE INTERNATIONAL

THE FORTUNE DIRECTORY OF THE LARGEST INDUSTRIAL CORPORATIONS OUTSIDE THE U.S.

In the leanest times since FORTUNE first ranked the largest industrial corporations outside the U.S. 26 years ago, the International 500 registered a 2.6% sales decline in 1982. For the third year in a row total net income of the group fell, and the decline was the sharpest ever: an alarming 39%. All together, 123 of the International 500 companies lost money—another record.

THE WORLD'S LARGEST INDUSTRIAL

FORTUNE's world list captures highlights of the great global downturn of 1982: total sales of the 50 largest corporations declined 3.3% from 1981 and net income 23.4%—both record drops. Not since 1958 have the U.S. and international lists of the largest industrial corporations both registered declines in revenue and net income. The 50 include 21 American companies (white background at right) and 29 non-U.S. companies (gray background), ranked by sales.

Sales of the list's 21 oil producers fell 7% from the previous year and profits declined $10.4 billion, 29%. ENI, No. 13, the Italian state oil company, was the biggest money loser of the 50, recording a $1.2-billion deficit. At the top of the list, the combined revenues of the Aramco sisters—Exxon, Mobil, Texaco, and Standard Oil of California—slid $36 billion from the 1981 level, while profits dropped 35% to a still comfortable $8.2 billion. Exxon lost its place as the world's biggest industrial profit maker to IBM.

Oil was also behind U.S. Steel's jump 23 places up the list to No. 21; its purchase of Marathon Oil helped boost revenues 32%. Peugeot, the French automaker, and Kuwait Petroleum left the list because their revenues failed to reach this year's cutoff of $12.9 billion. Joining the 50 largest industrials were IRI, No. 16, an Italian state holding company, and Mitsubishi Heavy Industries, No. 46.

RANK '82	'81	COMPANY	HEADQUARTERS	SALES $000	NET INCOME $000
1	1	Exxon	New York	97,172,523	4,185,932
2	2	Royal Dutch/Shell Group	The Hague/London	83,759,375	3,486,694
3	4	General Motors	Detroit	60,025,600	962,700
4	3	Mobil	New York	59,946,000	1,380,000
5	6	British Petroleum	London	51,322,452	1,245,623
6	5	Texaco	Harrison, N.Y.	46,986,000	1,281,000
7	8	Ford Motor	Dearborn, Mich.	37,067,200	(657,800)
8	11	International Business Machines	Armonk, N.Y.	34,364,000	4,409,000
9	7	Standard Oil of California	San Francisco	34,362,000	1,377,000
10	16	E.I. du Pont de Nemours	Wilmington, Del.	33,331,000	894,000
11	12	Gulf Oil	Pittsburgh	28,427,000	900,000
12	9	Standard Oil (Ind.)	Chicago	28,073,000	1,826,000
13	10	ENI	Rome	27,505,858	(1,206,970)
14	14	General Electric	Fairfield, Conn.	26,500,000	1,817,000
15	13	Atlantic Richfield	Los Angeles	26,462,150	1,676,078
16	•	IRI	Rome	24,815,296	N.A.
17	15	Unilever	London/Rotterdam	23,120,471	659,550
18	18	Shell Oil	Houston	20,062,000	1,605,000
19	17	Française des Pétroles	Paris	20,029,197	(80,595)
20	23	Petrobrás (Petróleo Brasileiro)	Rio de Janeiro	19,004,999	579,170
21	44	U.S. Steel	Pittsburgh	18,375,000	(361,000)
22	41	Occidental Petroleum	Los Angeles	18,212,226	155,602
23	20	Elf-Aquitaine	Paris	17,785,313	536,336
24	31	Siemens	Munich	16,962,630	279,794
25	29	Nissan Motor	Yokohama (Japan)	16,465,167	444,462

500

High U.S. interest rates—the prime rate averaged 14.9% last year—continued to help keep the dollar strong against major currencies. Since figures for all companies on the list are translated into dollars, the conversion is partly responsible for the International 500's worst performance.

Over the decade, however, the very biggest international companies grew faster, even in dollar terms, than their U.S. counterparts. The top 100 U.S. industrials grew at a 12.7% average annual compound rate from 1972 to 1982, while the top 100 internationals enjoyed a 16% rate. The robust Japanese economy probably gave much of the added fillip to the international companies' growth. Japan's fast-expanding auto and electronics industries are heavily represented among the top 100 year after year.

Japan, with 134 companies among the 500, more than any other country, finally caved in to the world recession in 1982. Total sales of Japanese companies on the list went up 6.2% in yen, but in dollar terms they crept forward a mere 0.4%. Earnings fell 26.4%, and the Japanese finished with 25 money losers, a record for any country. Once again Nissan Motor ranks ahead of Toyota Motor—but probably for the last time. Toyota's sales arm used to be a separate company, but after the end of Toyota Motor's 1982 fiscal year the two companies merged. In next year's directory their figures will be consolidated.

Six British companies left the list. The pound lost 15.8% of its value, but earnings of the 87 British companies dropped only half as much, 7.9%. Twenty spilled red ink, a total of $3 billion. The National Coal Board, No. 38, would have been a loser too had the government not covered an $818-million loss with what was described as a "deficit grant."

The 41 French corporations registered an overall loss of $2.1 billion in 1982. Eleven of the 19 French money losers belong to the government, among them Pechiney Ugine Kuhlmann, No. 106, which lost $455 million. Nationalized in 1982, this metal manufacturer fell 59 ranks as sales slid 42%.

The West German mark slipped 6.9% against the dollar in 1982—far less than the 19.4% decline of 1981. Sales for the 59 West German companies were off 3.3% from the previous year, but profits sank 18.3%. Volkswagenwerk, No. 18, lost $96 million.

There are 37 subsidiaries of U.S. companies among the International 500. IBM's German, French, British, and Japanese subsidiaries hauled in a hefty $11.3 billion in sales and $797 million in earnings.

Among 12 newcomers is Italy's IRI, No. 4, a state holding company formed in 1933 by Mussolini. It owns three companies previously ranked separately—Alfa Romeo (autos), Dalmine (metal products), and Italsider (steel)—whose figures are now consolidated with IRI's. Figures for IRI's assets, net income, and stockholders' equity will not be released until September. Another newcomer, Syntex, No. 489, a Panamanian pharmaceuticals company that mostly operates in the U.S., brings a 37th country to the International 500.

—Michael McFadden and Ann Goodman

CORPORATIONS

RANKED BY SALES

RANK '82	RANK '81	COMPANY	HEADQUARTERS	SALES $000	NET INCOME $000
26	21	**Petróleos de Venezuela**	Caracas	16,451,136	2,536,170
27	35	**Hitachi**	Tokyo	16,262,015	602,746
28	26	**Philips' Gloeilampenfabrieken**	Eindhoven (Netherlands)	16,092,759	162,084
29	28	**Daimler-Benz**	Stuttgart	16,022,800	388,975
30	25	**International Telephone & Telegraph**	New York	15,958,440	702,816
31	30	**Renault**	Paris	15,836,894	(194,796)
32	32	**Phillips Petroleum**	Bartlesville, Okla.	15,698,000	646,000
33	34	**Toyota Motor**	Toyota City (Japan)	15,647,797	605,093
34	39	**Sun**	Radnor, Pa.	15,519,000	537,000
35	42	**BAT Industries**	London	15,477,561*	453,869
36	27	**Volkswagenwerk**	Wolfsburg (Germany)	15,416,929	(95,813)
37	22	**Fiat**	Turin (Italy)	15,330,945	N.A.
38	36	**Tenneco**	Houston	15,241,000	819,000
39	33	**Matsushita Electric Industrial**	Osaka (Japan)	14,862,649	639,865
40	24	**Pemex (Petróleos Mexicanos)**	Mexico City	14,852,721	13,765
41	38	**Nippon Steel**	Tokyo	14,424,901	256,698
42	37	**Hoechst**	Frankfurt	14,408,902	106,544
43	40	**Bayer**	Leverkusen (Germany)	14,346,280	58,901
44	43	**Nestlé**	Vevey (Switzerland)	13,610,690	540,216
45	46	**United Technologies**	Hartford	13,577,129	533,721
46	•	**Mitsubishi Heavy Industries**	Tokyo	13,219,621	104,302
47	47	**Standard Oil (Ohio)**	Cleveland	13,120,000	1,879,000
48	45	**BASF**	Ludwigshafen on Rhine	12,959,797	113,099
49	50	**Thyssen**	Duisburg (Germany)	12,946,652	(27,449)
50	49	**Imperial Chemical Industries**	London	12,872,600	253,673
		TOTALS		1,240,293,675	39,009,955

THE INTERNATIONAL 500 RANKED BY SALES

RANK '82	'81	COMPANY	COUNTRY	INDUSTRY	SALES[1] $000	ASSETS[2] $000	NET INCOME[3] $000	STOCKHOLDERS' EQUITY[4] $000	EMPLOYEES
1	1	**Royal Dutch/Shell Group**	Neth./Britain	Petroleum	83,759,375	69,745,508	3,486,694	27,373,324	163,000
2	2	**British Petroleum**	Britain	Petroleum	51,322,452	42,495,152	1,245,623	13,989,228	145,150
3	3	**ENI**[5]	Italy	Petroleum	27,505,858[6]	19,623,487[6]	(1,206,970)[6]	1,707,002[6]	144,052[6]
4	●	**IRI**[5]	Italy	Metal mfg.—steel; shipbuilding; food products	24,815,296	N.A.	N.A.	N.A.	525,300
5	4	**Unilever**	Britain/Neth.	Food products; soaps, cosmetics	23,120,471	11,750,078	659,550	4,610,815	283,000
6	5	**Française des Pétroles**	France	Petroleum	20,029,197[6]	4,732,493[6]	(80,595)[6]	3,071,662[6]	47,290[6]
7	10	**Petrobrás (Petróleo Brasileiro)**[5]	Brazil	Petroleum	19,004,999	15,282,895	579,170	5,703,489	70,131
8	7	**Elf-Aquitaine**[5]	France	Petroleum	17,786,313[6]	19,731,899[6]	536,336[6]	5,057,418[6]	58,800[6]
9	17	**Siemens**[7]	Germany	Electronics; computers	16,962,630	14,543,975	279,794	3,712,515	324,000
10	15	**Nissan Motor**[9]	Japan	Motor vehicles	16,465,167	11,907,069	444,462	4,221,656	101,040
11	8	**Petróleos de Venezuela**[5]	Venezuela	Petroleum	16,451,136	22,801,983	2,535,170	19,260,315	44,414
12	20	**Hitachi**[9]	Japan	Electronics, appliances; office equipment	16,262,015	15,814,441	602,746	4,664,346	154,526
13	12	**Philips' Gloeilampenfabrieken**	Netherlands	Electronics, appliances	16,092,759	16,493,333	162,084	5,395,810	336,200
14	14	**Daimler-Benz**	Germany	Motor vehicles and parts	16,022,600	9,662,780	388,975	2,733,435	185,687
15	16	**Renault**[5]	France	Motor vehicles and parts	15,836,894[6]	11,667,507[6]	(194,796)[6]	1,587,389[6]	214,000[6]
16	19	**Toyota Motor**[9]	Japan	Motor vehicles	15,647,797[10]	8,386,004[10]	606,093[10]	5,151,306[10]	51,034[10]
17	24	**BAT Industries**	Britain	Tobacco	15,477,561[*]	10,424,774	433,869	4,402,578	178,000
18	13	**Volkswagenwerk**	Germany	Motor vehicles	15,416,929	10,903,716	(96,813)	2,503,796	239,116
19	9	**Fiat**	Italy	Motor vehicles and parts	15,330,945	N.A.	N.A.	N.A.	263,760
20	18	**Matsushita Electric Industrial**[11]	Japan	Electronics, appliances	14,862,649	12,306,396	699,665	5,586,465	121,254
21	11	**Pemex (Petróleos Mexicanos)**[5]	Mexico	Petroleum	14,852,721	20,712,500	13,765	5,262,500	125,000
22	22	**Nippon Steel**[9]	Japan	Metal manufacturing—steel	14,424,901	15,069,496	256,698	2,451,331	73,946
23	21	**Hoechst**	Germany	Chemicals	14,408,902[6]	10,969,554[6]	106,544[6]	2,463,120[6]	182,154[6]
24	23	**Bayer**	Germany	Chemicals	14,346,280[6]	12,173,781[6]	58,901[6]	2,905,281[6]	179,463[6]
25	25	**Nestlé**	Switzerland	Food products; beverages	13,610,690[6]	9,443,587[6]	540,216[6]	5,021,669[6]	141,509[6]
26	30	**Mitsubishi Heavy Industries**[9]	Japan	Motor vehicles; industrial equip.	13,219,621	16,452,371	104,302	1,262,066	95,370
27	26	**BASF**	Germany	Chemicals	12,959,797[6]	8,470,958[6]	113,099[6]	2,993,722[6]	115,868[6]
28	29	**Thyssen**[7]	Germany	Metal mfg.—steel; industrial equip.	12,946,652	7,041,804	(27,449)	1,057,906	143,892
29	28	**Imperial Chemical Industries**	Britain	Chemicals	12,872,600	11,804,928	253,673	4,942,990	123,800
30	31	**Idemitsu Kosan**[9]	Japan	Petroleum	12,348,489[10]	7,384,152[10]	(154,801)[10]	(43,125)[10]	7,653[10]
31	6	**Kuwait Petroleum**[5,9]	Kuwait	Petroleum	12,234,457[*]	10,792,333[*]	1,053,585[*]	7,597,091[*]	13,386
32	35	**Volvo**	Sweden	Motor vehicles and parts	12,027,234	6,330,369	78,684	726,266	75,136
33	27	**Peugeot**	France	Motor vehicles and parts	11,521,875[6]	8,730,267[6]	(326,637)[6]	1,209,199[6]	209,000[6]
34	36	**Toshiba**[9]	Japan	Electronics, appliances	10,153,363	9,159,223	194,824	1,602,340	103,000
35	32	**Générale d'Electricité**[5]	France	Electronics, appliances	10,004,106	11,973,858	68,475	875,653	192,200
36	33	**Canadian Pacific**	Canada	Metal manufacturing—steel; mining	9,960,276	14,046,543	152,607	3,245,492	127,000
37	37	**Petrofina**	Belgium	Petroleum	9,208,978	5,705,832	264,812	1,276,377	21,000
38	34	**National Coal Board**[5,9]	Britain	Mining—coal	9,033,760	9,926,047	0	140,343	282,000
39	40	**Esso Petroleum**	Britain	Petroleum	8,531,717	5,535,484	128,599	728,280	8,283
40	49	**Honda Motor**[12]	Japan	Motor vehicles and parts	8,254,192	4,940,944	202,297	1,607,436	42,416
41	51	**Hyundai Group**	South Korea	Shipbuilding; motor vehicles; industrial equip.	8,035,836	6,069,493	108,143	1,140,733	137,000
42	41	**General Electric Co.**[9]	Britain	Electronics; industrial equipment	8,006,671	7,269,486	683,720	3,496,034	184,000
43	64	**Indian Oil**[5,9]	India	Petroleum	7,833,291	2,603,262	119,271	638,634	25,546
44	44	**Saint-Gobain**[5]	France	Building materials; metal products	7,804,686[6]	5,834,496[6]	39,032[6]	1,409,641[6]	128,407[6]
45	38	**General Motors of Canada**	Canada	Motor vehicles and parts	7,756,601[14]	2,237,782	(56,099)	653,633	36,503
46	39	**Veba Oel**	Germany	Petroleum; chemicals	7,645,229[6]	3,119,784[6]	(23,549)[6]	591,495[6]	23,262[6]
47	50	**Maruzen Oil**[9]	Japan	Petroleum	7,365,788	4,338,445	(406,035)	(378,465)	4,061
48	42	**Ruhrkohle**	Germany	Mining—coal	7,246,189	5,790,336	17,852	260,462	134,479
49	56	**Nippon Kokan**[9]	Japan	Metal manufacturing—steel	7,167,059	10,272,991	136,762	1,087,053	37,821
50	43	**Thomson-Brandt**[5]	France	Electronics, appliances	7,151,860[6]	8,064,116[6]	(136,029)[6]	534,831[6]	129,000[6]

●Not on last year's list.
N.A. Not available.
[*] Fortune estimate.
[1] All companies on the list must have derived more than 50% of their sales from manufacturing and/or mining. Sales do not include excise taxes or customs duties levied according to either volume or value of sales, and so the figures for some companies—most of which sell gasoline, liquor, or tobacco—may be lower than those published by the companies themselves. Unless otherwise noted, figures exclude intracompany transactions and include consolidated subsidiaries more than 50% owned, either fully or on a prorated basis. Figures have benn converted to dollars using an exchange rate that consists of the average rate in the official exchange market during each company's fiscal year (ended December 31, 1982, unless otherwise noted).
[2] Total shown at each company's year-end. Figures have been converted to dollars at the market rate prevailing at each company's year-end.
[3] After taxes, minority interest, and extraordinary items.

RANK '82	RANK '81	COMPANY	COUNTRY	INDUSTRY	SALES $000	ASSETS $000	NET INCOME $000	STOCKHOLDERS' EQUITY $000	EMPLOYEES
51	46	**Esso**	Germany	Petroleum	7,149,149[14]	2,015,254	94,739	814,769	4,508
52	61	**Fried. Krupp**	Germany	Metal manufacturing—steel; industrial equip.	6,885,696	4,413,874	N.A.	N.A.	78,201
53	57	**Imperial Oil**	Canada	Petroleum	6,855,777[14]	6,087,664	216,396	3,336,586	15,476
54	49	**DSM[5]**	Netherlands	Natural gas; chemicals	6,802,400[6]	3,500,256[6]	(70,222)[6]	795,517[6]	28,610[6]
55	52	**Ciba-Geigy**	Switzerland	Chemicals; pharmaceuticals	6,793,537	9,385,803	304,548	5,746,949	79,413
56	55	**Mannesmann**	Germany	Metal products; industrial equipment	6,782,561	4,569,165	108,246	655,976	112,594
57	45	**Montedison**	Italy	Chemicals	6,663,605[6]	7,500,365[6]	(634,664)[6]	975,930[6]	84,169[6]
58	63	**Sumitomo Metal Industries[8]**	Japan	Metal manufacturing—steel	6,648,338	8,521,668	172,551	1,162,493	33,748
59	54	**British Steel[5,8]**	Britain	Metal manufacturing—steel	6,579,229	6,865,755	(963,094)	3,239,639	103,700
60	68	**Rio Tinto-Zinc**	Britain	Mining—alum., lead, zinc, copper, iron	6,438,749	10,816,006	194,191	2,872,274	70,314
61	60	**Gutehoffnungshütte[9]**	Germany	Industrial and transportation equipment	6,386,189	5,225,187	20,023	650,848	85,904
62	251	**Sunkyong[15]**	South Korea	Petroleum; textiles; chemicals	6,270,161	2,484,768	27,150	312,373	17,932
63	69	**Mitsubishi Electric[8]**	Japan	Electronics, appliances	6,219,225	5,368,443	152,304	1,116,802	60,549
64	71	**Grand Metropolitan[7]**	Britain	Beverages; food products	6,087,683	5,204,303	274,634	2,428,896	129,000
65	73	**Schlumberger**	Neth. Antilles	Measuring and scientific equipment	6,025,380	7,845,665	1,348,165	5,226,444	75,000
66	50	**Schneider**	France	Indus. equip.; metal manufacturing—steel	5,973,024[6]	10,736,157[6]	(53,542)[6]	100,430[6]	109,000[6]
67	93	**Samsung Group**	South Korea	Electronics, appliances; food prods.; textiles	5,966,993	4,640,547	27,591	709,145	97,384
68	72	**Ford Motor of Canada**	Canada	Motor vehicles and parts	5,945,293[14]	1,720,501	(87,369)	474,913	34,700
69	81	**Barlow Rand[7,16]**	South Africa	Food prod.; mining—coal, chrome, gold, lime	5,895,746	4,372,489	220,149	1,119,656	149,818
70	65	**Ford Motor**	Britain	Motor vehicles	5,750,506[14]	5,182,454	335,896	2,195,918	69,500
71	82	**Kawasaki Steel[8]**	Japan	Metal manufacturing—steel	5,700,869[10]	7,269,812[10]	141,039[10]	1,204,770[10]	29,433[10]
72	70	**George Weston Holdings[9]**	Britain	Food products	5,696,250	2,121,451	110,544	731	113,560
73	53	**Esso**	France	Petroleum	5,691,230[14]	2,155,579	(10,204)	253,442	4,564
74	80	**Robert Bosch**	Germany	Motor vehicle parts; electronics, appliances	5,683,568	4,150,659	73,346	1,253,903	112,154
75	67	**Toa Nenryo Kogyo**	Japan	Petroleum	5,666,546	3,543,839	74,073	773,323	4,031
76	76	**Nippon Mining[8]**	Japan	Petroleum; metal manufacturing—nonferrous	5,663,137	4,104,560	(36,831)	264,266	8,655
77	58	**Rhône-Poulenc[5]**	France	Chemicals	5,656,240[6]	5,256,825[6]	(128,344)[6]	937,685[6]	81,830[6]
78	66	**Michelin**	France	Rubber products	5,567,205[6]	7,672,529[6]	(632,935)[6]	1,987,319[6]	131,000[6]
79	74	**Chinese Petroleum[5]**	Taiwan	Petroleum	5,561,246[10]	3,707,353[10]	159,627[10]	1,523,094[10]	20,019[10]
80	97	**Nippon Electric[8]**	Japan	Electronics, appliances	5,505,574	5,596,271	122,706	840,342	69,061
81	100	**Türkiye Petrolleri[5]**	Turkey	Petroleum	5,465,580	3,428,505	342,834	685,449	10,244
82	91	**Lucky Group**	South Korea	Petroleum; electronics, appliances	5,460,829	3,666,040	74,050	595,379	42,752
83	62	**AEG-Telefunken**	Germany	Electronics, appliances	5,459,600[6]	3,920,420[6]	(29,300)[6]	330,697[6]	92,730[6]
84	87	**Broken Hill Proprietary[17]**	Australia	Metal manufacturing—steel	5,433,794	7,508,573	206,465	4,412,185	70,000
85	78	**BL[5]**	Britain	Motor vehicles	5,374,197	3,729,814	(512,420)	1,019,016	105,062
86	90	**Kobe Steel[8]**	Japan	Metal manufacturing—steel	5,300,638[10]	6,408,305[10]	59,900[10]	675,738[10]	32,709[10]
87	86	**Daikyo Oil[8]**	Japan	Petroleum	5,352,025	2,650,417	(101,242)	5,793	1,983
88	77	**Akzo Group**	Netherlands	Chemicals	5,290,359	3,835,695	61,652	947,848	73,700
89	84	**Mitsubishi Oil[8]**	Japan	Petroleum	5,286,203	3,541,849	(164,189)	(37,877)	3,292
90	117	**VÖEST-Alpine[5]**	Austria	Metal manufacturing—steel; industrial equip.	5,246,866[6]	6,671,596[6]	(14,948)[6]	263,156[6]	75,223
91	105	**Adam Opel**	Germany	Motor vehicles and parts	5,244,408[10,14]	2,369,842[10]	37,478[10]	478,427[10]	59,688[10]
92	75	**Imperial Group[18]**	Britain	Tobacco; food; beverages	5,146,259[6]	2,981,874	92,312	1,362,016	101,300
93	89	**Electrolux**	Sweden	Electronics, appliances	5,035,363	3,348,564	47,871	571,819	100,400
94	85	**Toyo Kogyo[18]**	Japan	Motor vehicles	4,945,393	2,819,823	110,706	602,245	28,585
95	102	**Ford-Werke**	Germany	Motor vehicles and parts	4,828,308[14]	1,758,411	133,560	444,281	49,100
96	98	**Mitsubishi Chemical Industries[19]**	Japan	Chemicals	4,789,298	4,738,058	2,486	467,915	14,794
97	94	**Brown Boveri**	Switzerland	Electrical and industrial equipment; electronics	4,772,893[6]	N.A.	N.A.	N.A.	94,100[6]
98	88	**ENPETROL[5]**	Spain	Petroleum; chemicals	4,754,460[6]	2,567,689[6]	25,206[6]	569,005[6]	7,908
99	83	**Dalgety[9]**	Britain	Food products	4,685,472	1,365,144	51,224	473,618	20,760
100	109	**Taiyo Fishery[19]**	Japan	Food products	4,666,654	2,043,627	(11,166)	75,576	10,320

Figures have been converted to dollars at the average market rate during each company's fiscal year.

Figures in parentheses are losses.

[4] Total at each company's year-end. Figures have been converted to dollars at the market rate prevailing at each company's year-end. Minority interest is not included.

[5] Government-owned.

[6] Also includes certain subsidiaries owned 50% or less, either fully or on a prorated basis.

[7] Figures are for fiscal year ended September 30, 1982.

[8] Figures are for fiscal year ended March 31, 1982.

[9] Figures are for fiscal year ended June 30, 1982.

[10] Parent only.

[11] Figures are for fiscal year ended November 20, 1982.

[12] Figures are for fiscal year ended February 28, 1982.

[13] Includes only wholly owned subsidiaries.

[14] Revenues include certain sales to foreign affiliates of the U.S. parent company.

RANK '82	RANK '81	COMPANY	COUNTRY	INDUSTRY	SALES $000	ASSETS $000	NET INCOME $000	STOCKHOLDERS' EQUITY $000	EMPLOYEES
101	92	**Thorn EMI[8]**	Britain	Electronics, appliances	4,654,761	3,078,993	124,400	1,082,848	97,524
102	95	**Alcan Aluminium**	Canada	Metal manufacturing—aluminum	4,644,000	6,633,000	(58,000)	2,511,000	72,000
103	101	**Sony[13,18]**	Japan	Electronics, appliances	4,509,738	4,476,200	188,004	1,712,710	43,126
104	99	**YPF (Yacimientos Petrolíferos)[6]**	Argentina	Petroleum	4,454,824	4,280,887	(3,669,510)	N.A.	31,363
105	147	**Sacilor[5]**	France	Metal manufacturing—steel	4,441,968[*]	5,412,972[*]	(541,300)[*]	141,517[*]	60,353[*]
106	47	**Pechiney Ugine Kuhlmann[5]**	France	Metal manufacturing—aluminum, steel	4,414,775[*]	4,510,831[*]	(455,285)[*]	625,984[*]	55,300[*]
107	123	**Ishikawajima-Harima Heavy Ind.[8]**	Japan	Industrial equipment; shipbuilding	4,224,469	7,028,201	68,377	480,274	42,000
108	107	**Pirelli**	Italy/Switz.	Rubber products	4,209,553	N.A.	N.A.	N.A.	69,080
109	106	**Sanyo Electric[20]**	Japan	Electronics, appliances	4,203,642	3,770,325	116,415	1,224,073	22,443
110	116	**Mobil Oil**	Germany	Petroleum	4,178,718[10,14]	1,706,778[10]	(70,549)[10]	460,050[10]	2,491[10]
111	104	**Usinor[5]**	France	Metal manufacturing—steel	4,127,855[*]	6,177,712[*]	(694,437)[*]	626,005[*]	54,000[*]
112	96	**Metallgesellschaft[7]**	Germany	Metal manufacturing—nonferrous	4,120,112	1,858,796	8,702	259,809	23,757
113	124	**ASEA**	Sweden	Electronics, appliances; industrial equipment	4,100,208	4,058,960	44,372	542,544	55,882
114	133	**BMW (Bayerische Motoren Werke)**	Germany	Motor vehicles and parts	4,017,891	2,172,878	77,800	616,547	40,736
115	112	**Charbonnages de France[5]**	France	Chemicals; mining—coal	3,982,634[*]	4,479,570[*]	149,815[*]	478,546[*]	73,359[*]
116	115	**Salzgitter[5,7]**	Germany	Metal manufacturing—steel; shipbuilding	3,971,760	3,803,428	(15,785)	329,356	55,455
117	118	**Thomas Tilling**	Britain	Industrial equipment; building materials	3,914,614	2,251,771	9,972	852,362	42,600
118	114	**Solvay**	Belgium	Chemicals; plastics	3,888,339[*]	3,235,736[*]	39,803[*]	1,087,932[*]	45,369[*]
119	111	**Showa Oil**	Japan	Petroleum	3,878,979[10]	2,578,253[10]	4,670[10]	49,599[10]	1,876[10]
120	137	**Kawasaki Heavy Industries[8]**	Japan	Industrial equip.; shipbuild., transport. equip.	3,874,825	4,602,671	(24,525)	375,831	28,432
121	132	**Texaco Canada**	Canada	Petroleum	3,864,327	2,411,970	222,880	1,314,955	4,418
122	108	**Allied-Lyons[12]**	Britain	Beverages; food products	3,807,453	3,379,600	160,078	1,696,300	75,609
123	126	**Gulf Canada**	Canada	Petroleum	3,794,627[14]	3,996,910	162,905	1,810,198	10,179
124	138	**IBM Deutschland**	Germany	Office equipment (includes computers)	3,762,310[14]	2,662,985	266,170	588,730	27,621
125	103	**Degussa[7]**	Germany	Metal products; chemicals	3,758,769	1,391,050	24,456	246,841	21,362
126	127	**CEPSA (Española de Petróleos)**	Spain	Petroleum	3,751,611[10]	1,453,576[10]	28,176[10]	141,708[10]	6,590[10]
127	119	**Esso Italiana**	Italy	Petroleum	3,722,698[10,14]	627,295[10]	(44,358)[10]	65,312[10]	3,390[10]
128	125	**Flick Group**	Germany	Paper and wood products; chemicals	3,718,314	3,201,131	38,085	741,506	43,509
129	128	**Neste[5]**	Finland	Petroleum	3,633,876[10]	2,092,438[10]	9,266[10]	113,716[10]	6,518[10]
130	145	**British Aerospace**	Britain	Aerospace	3,591,662	2,941,846	(40,413)	1,090,856	78,983
131	131	**Asahi Chemical Industry[8]**	Japan	Chemicals; textiles	3,560,698	3,133,793	56,299	668,024	21,206
132	155	**Fujitsu[8]**	Japan	Office equip. (incl. computers); electronics	3,518,640	3,450,489	139,642	1,178,779	48,864
133	142	**Roche/Sapac**	Switzerland	Pharmaceuticals; chemicals	3,494,873	5,400,299	138,350	3,518,057	46,484
134	120	**Courtaulds[8]**	Britain	Textiles	3,419,364	2,060,973	34,206	612,130	80,000
135	157	**IBM France**	France	Office equipment (includes computers)	3,390,453[10]	1,953,271[10]	205,826[10]	722,097[10]	20,778[10]
136	110	**Texaco**	Britain	Petroleum	3,356,683[14]	1,328,649	(260,885)	470,841	4,928
137	113	**ÖMV[5]**	Austria	Petroleum	3,353,649[10]	1,993,421[10]	12,310[10]	754,803[10]	7,860[10]
138	121	**Deutsche Texaco**	Germany	Petroleum	3,338,202[14]	1,426,973	27,636	291,291	4,641
139	134	**BSN[21]**	France	Food products; beverages	3,328,721[*]	2,238,724[*]	87,286[*]	645,697[*]	39,914[*]
140	122	**Cockerill Sambre[5]**	Belgium	Metal manufacturing—steel	3,312,634[*]	3,911,298[*]	(250,432)[*]	418,974[*]	39,391[*]
141	130	**Guest Keen & Nettlefolds**	Britain	Motor vehicle parts	3,309,822	2,554,337	(90,448)	1,034,226	71,553
142	149	**Snow Brand Milk Products[8]**	Japan	Food products	3,304,148	1,197,872	8,204	176,603	16,709
143	161	**Aérospatiale[5]**	France	Aerospace	3,257,528[10]	5,066,295[10]	14,637[10]	293,809[10]	36,450[10]
144	158	**Komatsu**	Japan	Industrial equipment	3,253,870	3,965,424	131,054	1,345,126	24,645
145	190	**Canada Development Corp.**	Canada	Chemicals	3,251,016	6,120,102	(101,935)	904,177	20,657
146	140	**Reed International[8]**	Britain	Publishing, printing; paper, pulp	3,245,664	2,015,380	103,380	1,013,388	56,500
147	152	**Esso**	Belgium	Petroleum; chemicals	3,245,528[10,14]	424,750[10]	6,943[10]	176,047[10]	1,588[10]
148	136	**ALUSUISSE (Swiss Aluminium)**	Switzerland	Metal manufacturing—aluminum	3,241,493	4,570,710	(88,068)	1,433,026	37,299
149	162	**Toray Industries[8]**	Japan	Chemicals	3,229,542	2,920,399	73,138	699,835	33,337
150	153	**L.M. Ericsson Telephone**	Sweden	Electronics—telecommunications	3,209,616[*]	3,485,705[*]	57,175[*]	543,447[*]	66,300[*]

•Not on last year's list.
N.A. Not available.
*Fortune estimate.

[15] Figures include Korea Oil (1981 rank: 129), acquired on November 28, 1980.

[16] Acquired Tiger Oats & National Milling (1981 rank: 417) on August 6, 1982.

[17] Figures are for fiscal year ended May 31, 1982.

[18] Figures are for fiscal year ended October 31, 1982.

[19] Figures are for fiscal year ended January 31, 1982.

[20] Figures are for fiscal year ended November 30, 1982.

[21] Name changed from BSN-Gervais Danone in December 1982.

RANK '82	RANK '81	COMPANY	COUNTRY	INDUSTRY	SALES $000	ASSETS $000	NET INCOME $000	STOCK-HOLDERS' EQUITY $000	EMPLOYEES
151	146	**Norsk Hydro**[5]	Norway	Chemicals; petroleum	3,182,773	3,161,473	24,162	617,989	19,618
152	151	**BICC**	Britain	Industrial equipment	3,147,471	1,532,893	59,657	493,490	50,000
153	173	**Sharp**[8]	Japan	Electronics, appliances	3,145,685	2,802,356	127,789	891,380	21,905
154	143	**Isuzu Motors**[18]	Japan	Motor vehicles and parts	3,029,923	2,656,510	14,221	325,370	21,479
155	144	**CSR**[8]	Australia	Sugar; mining; build. materials; chemicals	3,024,763	2,791,987	91,425	1,314,059	16,046
156	154	**Saab-Scania**	Sweden	Motor vehicles	2,978,154	2,300,234	74,956	369,420	40,311
157	164	**Sandoz**	Switzerland	Pharmaceuticals; dyes	2,978,076	3,298,132	134,316	1,808,717	37,262
158	240	**Chrysler Canada**	Canada	Motor vehicles and parts	2,964,250	553,306	13,616	(29,403)	11,176
159	141	**Ranks Hovis McDougall**[22]	Britain	Food products	2,902,831	1,239,378	24,187	540,349	47,454
160	175	**Koor Industries**	Israel	Electronics; fab. metal prod.; food prod.; chem.	2,900,000*	2,650,000*	60,000*	450,000*	31,300
161	197	**Ssangyong Cement Industrial**	South Korea	Petroleum; building materials	2,891,545	2,293,217	18,932	297,416	16,818
162	168	**Philippine National Oil**[5]	Philippines	Petroleum	2,889,796	2,119,140	53,174	396,923	5,911
163	159	**Unigate**[8]	Britain	Food products	2,874,758	1,186,146	30,001	538,574	36,000
164	148	**Bridgestone Tire**	Japan	Rubber products	2,859,505	2,684,154	51,307	996,349	32,350
165	•	**NOVA, AN ALBERTA CORP.**[23]	Canada	Petroleum; petrochemicals	2,838,107	5,141,040	121,370	1,238,563	9,256
166	158	**Sumitomo Chemical**	Japan	Chemicals	2,782,581	2,987,588	(28,123)	413,183	10,665
167	150	**BOC Group**[7]	Britain	Chemicals, gas; industrial equipment	2,773,818	3,350,196	127,644	1,492,007	38,370
168	167	**Koa Oil**[8]	Japan	Petroleum	2,769,911[10]	1,906,794[10]	5,553[10]	140,242[10]	1,380[10]
169	189	**Cadbury Schweppes**	Britain	Food products; beverages	2,760,314	1,698,900	68,754	630,373	38,148
170	139	**Bowater**	Britain	Paper and wood products	2,739,670	1,966,032	44,786	723,246	32,200
171	211	**Steel Authority of India**[5,8]	India	Metal manufacturing—steel	2,723,708	6,794,652	43,691	3,521,497	199,737
172	224	**Petro-Canada**[5]	Canada	Petroleum	2,698,266	6,141,429	8,569	2,717,612	6,166
173	176	**Beecham Group**[8]	Britain	Pharmaceuticals; soaps, cosmetics; beverages	2,688,636	2,104,073	227,397	1,138,593	33,400
174	166	**Burmah Oil**	Britain	Petroleum; motor vehicle parts	2,688,585	1,556,031	15,570	558,372	25,200
175	163	**Dunlop Holdings**	Britain	Rubber products	2,667,942	1,925,420	(139,958)	430,388	59,000
176	171	**Ultramar**	Britain	Petroleum	2,647,473	2,020,235	182,120	723,406	4,500
177	206	**Statoil**[5]	Norway	Petroleum	2,623,476	3,059,490	62,265	416,997	2,933
178	188	**Sumitomo Electric Industries**[8]	Japan	Fabricated metal products	2,612,903	1,899,146	49,405	501,625	19,595
179	165	**Rolls-Royce**[5]	Britain	Aerospace	2,611,959	2,007,938	(234,429)	800,910	48,500
180	208	**Suzuki Motor**[8]	Japan	Motor vehicles and parts	2,594,411	1,436,314	29,475	297,962	16,700
181	174	**Bertelsmann**[9]	Germany	Publishing, printing	2,567,429[6]	1,242,064[6]	11,429[6]	197,063[6]	29.527[6]
182	170	**Ube Industries**[8]	Japan	Chemicals; cement	2,565,464	2,933,370	7,958	210,671	14,771
183	172	**Iscor**[5,9]	South Africa	Metal manufacturing—steel	2,555,280[10]	3,274,555[10]	(22,404)[10]	1,709,472[10]	70,313[10]
184	186	**Saarbergwerke**[5]	Germany	Petroleum; mining—coal	2,539,012[6]	2,157,501[6]	(36,281)[6]	351,194[6]	32,599[6]
185	183	**Kubota**[24]	Japan	Industrial and farm equipment; fabr. metal prod.	2,538,695	2,486,377	65,006	1,010,246	18,500
186	200	**Koç Holding**	Turkey	Motor vehicles and parts; metal products	2,533,206[6]	1,248,215[6]	56,048[6]	190,843[6]	26,983[6]
187	207	**Asahi Glass**	Japan	Building materials; chemicals	2,521,967	2,710,260	91,612	1,038,095	17,068
188	192	**Vallourec**	France	Metal products—steel tubes; building materials	2,518,598[6]	1,229,486[6]	47,388[6]	311,218[6]	36,000[6]
189	198	**Haci Ömer Sabanci Holding**	Turkey	Textiles; rubber products	2,509,584[6]	2,522,325[6]	25,889[6]	149,231[6]	26,440[6]
190	177	**Bass**[7]	Britain	Beverages	2,504,600	2,829,646	169,400	1,633,618	72,507
191	248	**Hiram Walker Resources**[7]	Canada	Beverages; petroleum	2,500,507	4,014,844	(28,414)	1,377,755	11,020
192	185	**Lafarge Coppée**	France	Building materials	2,499 412[6]	2,680,314[6]	11,457[6]	408,477[6]	28,170[6]
193	•	**EFIM**[5]	Italy	Metal manufacturing; aerospace; metal prod.	2,489 893[10]	1,272,192[10]	(287,798)[10]	1,014,249[10]	41,600[10]
194	180	**Nippondenso**	Japan	Motor vehicle parts	2,482,919	2,410,626	110,030	1,393,882	31,552
195	199	**Dai Nippon Printing**[17]	Japan	Publishing, printing	2,470,322	1,770,095	99,127	1,016,149	13,028
196	191	**Olivetti**	Italy	Office equipment (includes computers)	2,466,745	N.A.	75,953	N.A.	49,703
197	169	**Hawker Siddeley Group**	Britain	Industrial equipment; electronics	2,461,504	2,102,591	134,359	1,041,021	47,200
198	230	**Northern Telecom**	Canada	Telecommunications equipment	2,460,195	1,965,850	128,247	816,622	34,449
199	203	**Furukawa Electric**[8]	Japan	Metal manufacturing—copper	2,458,488	2,145,966	17,736	304,081	13,452
200	187	**PETROGAL (Petróleos de Portugal)**[5]	Portugal	Petroleum	2,453,861[10]	3,102,875[10]	10,379[10]	398,285[10]	7,165[10]

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[22] Figures are for fiscal year ended August 31, 1982.
[23] Figures include Husky Oil (1981 rank: 376).
[24] Figures are for fiscal year ended April 15, 1982.

RANK '82	RANK '81	COMPANY	COUNTRY	INDUSTRY	SALES $000	ASSETS $000	NET INCOME $000	STOCKHOLDERS' EQUITY $000	EMPLOYEES
201	202	**Canada Packers**[8]	Canada	Food products	2,447,016	442,704	24,976	219,754	15,000
202	181	**Rank Xerox**[18]	Britain	Office equipment	2,422,557	2,318,956	104,345	1,145,056	33,349
203	201	**VIAG**[5]	Germany	Metal manufacturing—aluminum	2,420,244*	2,755,899*	2,379*	650,679*	24,869*
204	284	**Hitachi Zosen**[8]	Japan	Shipbuilding; industrial equipment	2,401,714	3,566,006	36,615	208,794	21,017
205	212	**Yamaha Motor**[25]	Japan	Motor vehicles	2,391,537	2,208,569	35,864	320,259	11,999
206	222	**Pohang Iron & Steel**	South Korea	Metal manufacturing—steel	2,362,621[10]	4,154,850[10]	20,930[10]	1,779,388[10]	14,473[10]
207	210	**Fuji Photo Film**[26]	Japan	Chemicals	2,378,448	2,311,875	236,911	1,234,297	15,916
208	260	**Dome Petroleum**	Canada	Petroleum	2,374,438	8,064,243	(200,307)	684,069	7,500
209	204	**Conoco**	Britain	Petroleum	2,369,786*[14]	1,194,893	248,775	719,363	2,243
210	228	**MBB (Messerschmitt-Bölkow-Blohm)**[5]	Germany	Aerospace	2,338,444*	2,400,336*	24,705*	156,965*	38,494
211	205	**International Thomson Organisation**	Canada	Petroleum; publishing, printing	2,333,968	1,382,257	90,098	373,111	22,500
212	231	**Canon**	Japan	Photographic equipment; office machines	2,330,849	2,569,156	86,773	1,001,369	25,607
213	225	**Klöckner-Werke**[7]	Germany	Metal manufacturing—iron, steel	2,316,985	2,012,180	(21,179)	298,152	30,301
214	229	**Fuji Heavy Industries**[8]	Japan	Motor vehicles; shipbuilding	2,301,726[10]	1,354,763[10]	53,257[10]	292,290[10]	13,388[10]
215	214	**Deutsche Babcock**[7]	Germany	Metal products; industrial equipment	2,286,607	1,931,233	(181,090)	145,538	32,337
216	195	**Metal Box**[8]	Britain	Metal products	2,283,900	1,627,729	(34,148)	565,175	48,865
217	179	**SKF**	Sweden	Metal products	2,283,495	2,574,692	141,386	732,832	47,138
218	254	**Toppan Printing**[17]	Japan	Publishing, printing	2,273,850	1,334,361	63,758	592,815	11,300
219	196	**Noranda Mines**	Canada	Metal manufacturing—nonferrous; mining	2,264,196	4,639,253	(67,224)	2,200,441	25,600
220	182	**Lucas Industries**[27]	Britain	Motor vehicle parts	2,226,413	1,665,004	5,473	760,027	67,978
221	79	**Hoogovens Groep**[28]	Netherlands	Metal manufacturing—steel	2,224,597	1,924,419	(39,791)	329,867	29,785
222	213	**Kanebo**[25]	Japan	Textiles; soaps, cosmetics	2,180,302	2,128,298	(22,322)	60,568	21,773
223	246	**Kirin Brewery**[19]	Japan	Beverages	2,176,595	2,226,512	89,974	812,322	15,088
224	241	**Sulzer Brothers**	Switzerland	Industrial equipment	2,175,593	3,460,523	14,760	1,605,978	34,910
225	245	**IBM United Kingdom Holdings**	Britain	Office equipment (includes computers)	2,169,581[14]	1,495,860	182,291	792,014	15,337
226	217	**L'Air Liquide**	France	Chemicals, gases	2,169,280*	2,111,728*	108,947*	553,134*	N.A.
227	220	**Rothmans International**[8]	Britain	Tobacco	2,164,570	2,183,520	90,430	621,416	22,898
228	267	**Empresa Colombiana de Petróleos**[5]	Colombia	Petroleum	2,151,507	1,429,895	(10,349)	N.A.	10,463
229	238	**Takeda Chemical**[8]	Japan	Pharmaceuticals	2,126,383	2,218,429	108,505	1,097,305	12,617
230	239	**United Biscuits (Holdings)**	Britain	Food products	2,108,461	1,014,971	148,880	427,637	40,400
231	194	**Esso Nederland**	Netherlands	Petroleum	2,104,775[14]	715,162	34,513	370,133	1,740
232	247	**Teijin**[8]	Japan	Chemicals	2,104,061	2,057,474	35,617	386,203	10,524
233	232	**Oji Paper**[8]	Japan	Paper, pulp and wood products	2,092,718	1,816,858	11,704	294,191	9,941
234	226	**Tabacalera**[5]	Spain	Tobacco	2,086,669	521,413	14,860	59,815	8,556
235	265	**Hanson Trust**[7]	Britain	Food products	2,076,115	1,290,531	74,851	319,413	44,000
236	311	**Korea Explosives Group**	South Korea	Petroleum; chemicals	2,073,653	1,923,098	17,394	305,255	17,091
237	209	**Chemische Werke Hüls**	Germany	Chemicals	2,061,125[10]	1,195,030[10]	0[10]	397,179[10]	17,133[10]
238	236	**Hyosung Group**	South Korea	Textiles; industrial equipment	2,060,790	1,855,363	1,130	334,436	20,878
239	184	**Massey-Ferguson**[18]	Canada	Farm and industrial equipment	2,058,124	2,069,232	(413,195)	236,617	29,749
240	243	**Oerlikon-Bührle**	Switzerland	Industrial and military equip.; leather products	2,057,889	3,563,886	8,512	1,636,214	33,002
241	221	**Matsushita Electric Works**[20]	Japan	Electronics, appliances; building materials	2,049,105	1,376,485	52,803	662,444	15,372
242	244	**Nippon Suisan**[8]	Japan	Food products	2,041,550	923,710	9,778	163,239	6,457
243	242	**Mitsui Toatsu Chemicals**[8]	Japan	Chemicals	2,022,314	1,826,389	(37,772)	62,699	6,287
244	223	**Union International**	Britain	Food products	2,014,515	675,143	5,346	122,387	13,169
245	•	**Jacobs Suchard**[29]	Switzerland	Food products	2,000,635	910,764	45,016	313,306	12,039
246	240	**Toyo Seikan**[8]	Japan	Fabricated metal products	1,996,636	1,341,055	33,757	375,791	13,570
247	305	**KUKjE**	South Korea	Rubber products; metal manufacturing—steel	1,992,212	1,494,663	7,053	87,208	41,800
248	235	**British Shipbuilders**[5,8]	Britain	Shipbuilding, transportation equipment	1,959,676	1,101,823	(29,193)	404,836	69,486
249	252	**Ajinomoto**[8]	Japan	Food products	1,954,351	1,482,578	43,905	587,251	10,712
250	•	**IBM Japan**	Japan	Office equipment (includes computers)	1,947,245[10,14]	1,609,646[10]	142,979[10]	890,908[10]	13,400[10]

•Not on last year's list.
N.A. Not available.
*Fortune estimate.

[25] Figures are for fiscal year ended April 30, 1982.
[26] Figures are for fiscal year ended October 20, 1982.
[27] Figures are for fiscal year ended July 31, 1982.
[28] Name changed from ESTEL on January 1, 1982.
[29] Figures include Jacobs (1981 rank: 367).

RANK '82	RANK '81	COMPANY	COUNTRY	INDUSTRY	SALES $000	ASSETS $000	NET INCOME $000	STOCKHOLDERS' EQUITY $000	EMPLOYEES
251	237	**Toyobo**[25]	Japan	Textiles; chemicals	1,941,926	1,754,246	23,957	212,296	17,630
252	216	**Avions Marcel Dassault-Breguet**	France	Aerospace	1,927,408[10]	3,907,586[10]	48,954[10]	299,978[10]	15,782[10]
253	262	**Nissan Shatai**[8]	Japan	Motor vehicles and parts	1,924,762[10]	591,304[10]	19,342[10]	167,671[10]	6,854[10]
254	227	**Consolidated Gold Fields**[9]	Britain	Building materials; mining—gold	1,917,151	1,973,090	133,844	1,098,224	100,994
255	281	**Seagram**[27]	Canada	Beverages	1,915,515	5,040,966	279,441	2,521,426	14,200
256	312	**Chiyoda Chemical Eng. & Const.**[7]	Japan	Industrial equipment	1,887,465	1,466,925	27,669	181,957	3,702
257	233	**Mobil Oil**	Britain	Petroleum	1,873,765[14]	1,138,337	(166,242)	321,053	2,386
258	317	**Vauxhall Motors**	Britain	Motor vehicles	1,854,697	543,166	(67,739)	(85,783)	20,527
259	406	**Australian Consolidated Industries**[8]	Australia	Glass; packaging; building materials	1,853,559	1,800,925	86,828	700,311	30,600
260	272	**Fuji Electric**[8]	Japan	Electronics, appliances	1,852,612	1,602,272	27,862	194,896	17,081
261	256	**Moore**	Canada	Publishing, printing	1,847,076	1,296,368	102,204	710,736	26,218
262	278	**Hino Motors**[8]	Japan	Motor vehicles	1,846,706[10]	951,024[10]	25,260[10]	239,953[10]	8,413[10]
263	250	**Plessey**[8]	Britain	Electronics, appliances	1,840,388	1,456,124	140,944	640,398	42,929
264	266	**Pilkington Brothers**[8]	Britain	Glass	1,832,362	2,735,260	20,447	1,410,018	40,300
265	•	**Tarmac**	Britain	Building materials	1,830,645	938,440	77,152	375,861	22,811
266	258	**Brooke Bond Group**[9]	Britain	Food products; beverages	1,829,258	967,805	25,219	473,078	72,000
267	310	**Northern Foods**[7]	Britain	Food products	1,814,638	721,460	58,407	328,854	21,980
268	283	**Dainippon Ink & Chemicals**[8]	Japan	Chemicals	1,796,353	1,477,345	11,299	263,476	9,312
269	215	**IMETAL**[5]	France	Mining—nonferrous	1,788,750[6]	1,652,031[6]	(97,529)[6]	502,549[6]	22,000[6]
270	257	**Mobil Oil Française**	France	Petroleum	1,753,489[10]	1,121,519[10]	(12,151)[10]	451,794[10]	2,321[10]
271	253	**Babcock International**	Britain	Industrial equipment	1,753,324	1,014,326	(7,638)	303,602	30,116
272	263	**Chevron Oil Italiana**	Italy	Petroleum	1,750,143[14]	293,485	(18,243)	17,659	866
273	291	**Gallaher**	Britain	Tobacco	1,743,648	1,289,137	73,082	501,065	27,142
274	218	**Métallurgie Hoboken-Overpelt**[7]	Belgium	Metal manufacturing—nonferrous	1,712,766[10]	740,583[10]	9,755[10]	158,266[10]	6,665[10]
275	298	**Standard Elektrik Lorenz**	Germany	Electronics, appliances	1,710,458[14]	854,241	11,490	257,583	31,650
276	270	**KHD (Klöckner-Humboldt-Deutz)**	Germany	Industrial and farm equipment	1,709,334	1,468,232	21,855	355,089	24,872
277	268	**Henkel**	Germany	Chemicals	1,708,783	1,165,566	31,484	503,425	17,339
278	342	**Mobil Oil Italiana**	Italy	Petroleum	1,684,557[14]	N.A.	N.A.	N.A.	1,518
279	279	**L'Oréal**	France	Soaps, cosmetics	1,682,775[6]	1,263,966[6]	79,422[6]	435,138[6]	24,104[6]
280	282	**Preussag**	Germany	Metal mfg.—nonferrous; petroleum; mining—coal	1,675,530[6]	1,280,597[6]	28,082[6]	267,031[6]	16,743[6]
281	290	**Daihatsu Motor**[9]	Japan	Motor vehicles and parts	1,675,504[10]	974,728[10]	21,812[10]	272,880[10]	10,775[10]
282	288	**Formosa Plastics Group**	Taiwan	Chemicals	1,674,965	1,720,201	72,364	647,014	31,211
283	259	**Mitsui Mining**[8]	Japan	Mining—coal	1,673,188	1,040,599	7,809	53,483	2,015
284	274	**PETRONOR**	Spain	Petroleum	1,661,339	612,000	24,538	111,604	581
285	160	**Statsföretag Group**[5]	Sweden	Industrial equipment; tobacco; chemicals	1,661,331	1,772,503	(310,971)	225,185	27,701
286	289	**CODELCO-CHILE**[5]	Chile	Mining—copper	1,659,642	2,939,202	160,564	1,607,673	26,757
287	294	**Vale do Rio Doce**[5]	Brazil	Mining—iron	1,654,821	3,909,899	238,822	1,621,825	29,000
288	292	**Jujo Paper**[8]	Japan	Paper, pulp and wood products	1,640,892	1,542,727	6,850	164,371	7,449
289	276	**Stelco**	Canada	Metal manufacturing—steel	1,637,435	2,243,076	(33,071)	1,228,748	22,104
290	315	**RMC Group**	Britain	Building materials	1,618,094	909,868	30,971	289,442	15,527
291	301	**Nippon Gakki**[25]	Japan	Musical instruments, sporting goods	1,612,877	1,207,532	29,247	433,751	18,751
292	255	**Showa Denko**	Japan	Chemicals	1,611,370	2,212,893	(1,120)	192,309	6,270
293	286	**Unitika**[8]	Japan	Textiles	1,610,704	1,572,624	(13,946)	88,270	8,474
294	307	**Honshu Paper**[8]	Japan	Paper, pulp and wood products	1,610,396	1,775,079	2,562	86,473	6,989
295	293	**Union Laitière Normande**	France	Food products	1,610,053[6]	551,564[6]	1,227[6]	47,011[6]	7,350[6]
296	295	**Nisshin Steel**[8]	Japan	Metal manufacturing—steel	1,604,373	1,917,080	35,635	357,337	10,398
297	384	**Mitsui Engineering & Shipbuilding**[8]	Japan	Industrial equip.; shipbuilding, transportation equip.	1,601,991[10]	2,079,103[10]	28,302[10]	253,869[10]	12,116[10]
298	280	**Nippon Light Metal**[8]	Japan	Fabricated metal prod.; metal mfg.—aluminum	1,596,784	1,914,147	(41,970)	62,647	10,254
299	304	**Glaxo Holdings**[9]	Britain	Pharmaceuticals	1,589,631	1,393,862	147,668	742,506	28,106
300	273	**Unión Explosivos Río Tinto**	Spain	Petroleum; chemicals	1,584,834[10]	1,279,784[10]	(379,846)[10]	131,509[10]	9,475[10]

RANK		COMPANY	COUNTRY	INDUSTRY	SALES $000	ASSETS $000	NET INCOME $000	STOCK-HOLDERS' EQUITY $000	EMPLOYEES
301	275	**Mitsubishi Metal**[8]	Japan	Metal manufacturing—copper	1,580,095	1,504,935	11,330	115,847	7,604
302	287	**Daido Steel**[9]	Japan	Metal manufacturing—steel	1,578,696	1,234,933	26,728	184,259	10,421
303	300	**Reckitt & Colman**	Britain	Food products; beverages; household cleaners	1,576,832	799,939	77,029	392,430	30,124
304	346	**Fuji Kosan**[8]	Japan	Petroleum	1,574,721[10]	1,049,138[10]	(87,907)[10]	(44,959)[10]	953[10]
305	271	**Mitsubishi Petrochemical**	Japan	Chemicals	1,564,335	1,862,275	(36,474)	118,138	3,065
306	219	**TI Group**[30]	Britain	Metal products	1,552,130	876,471	(104,968)	356,284	32,000
307	350	**Ricoh**[8]	Japan	Office equipment (includes computers)	1,537,320	1,198,783	48,970	567,464	17,800
308	303	**Fletcher Challenge**[9]	New Zealand	Building materials; paper and wood products	1,523,590	1,298,242	72,476	551,955	18,300
309	308	**Sasol**[9]	South Africa	Chemicals; mining—coal	1,519,657	1,265,792	201,771	751,020	28,000
310	333	**Northern Engineering Industries**	Britain	Industrial equipment; electronics	1,516,790	1,087,290	38,366	322,632	32,837
311	421	**John Labatt**[25]	Canada	Food products; beverages	1,510,794	742,380	44,715	271,218	11,000
312	319	**Nisshin Flour Milling**[8]	Japan	Food products	1,503,927	537,938	24,481	197,571	3,596
313	306	**Coats Patons**	Britain	Textiles	1,497,896	1,090,208	44,786	548,340	46,000
314	316	**Sekisui Chemical**[8]	Japan	Chemicals; building materials	1,497,737	1,286,195	4,537	179,984	8,500
315	264	**MacMillan Bloedel**	Canada	Paper, wood products; building materials	1,493,785	1,748,697	(46,473)	739,592	18,581
316	331	**Béghin-Say**	France	Food products; paper products	1,491,137[10]	1,474,715[10]	15,736[10]	301,465[10]	8,482[10]
317	360	**Federale Volksbeleggings Beperk**[8]	South Africa	Food products; pharmaceuticals	1,483,200	896,771	47,307	232,713	51,200
318	285	**Sandvik Group**	Sweden	Metal manufacturing—steel, cemented carbide	1,480,980[e]	1,717,237[e]	(11,292)[e]	252,394[e]	27,163[e]
319	•	**Mitsubishi Mining & Cement**[8]	Japan	Building materials	1,469,950	1,254,558	20,985	194,558	6,043
320	297	**Distillers**[8]	Britain	Beverages	1,467,380	2,353,592	247,844	1,817,154	19,540
321	341	**Meiji Milk Products**[8]	Japan	Food products	1,463,922	527,879	9,435	105,994	6,340
322	234	**Johnson Matthey**[8]	Britain	Metal manufacturing; chemicals	1,463,323	2,826,208	74,862	540,384	10,203
323	302	**Arla**[9]	Sweden	Food products	1,455,124	416,569	29,489	78,268	8,382
324	347	**Sumitomo Heavy Industries**[8]	Japan	Industrial equipment; shipbuilding	1,447,448	1,806,739	41,241	125,668	9,986
325	296	**Schering**	Germany	Pharmaceuticals; chemicals	1,446,100	1,385,551	42,555	417,653	20,086
326	370	**Dunlop Olympic**[9]	Australia	Rubber products; textiles	1,441,969	772,485	17,543	323,313	21,668
327	338	**Daishowa Paper**[8]	Japan	Paper, pulp and wood products	1,440,017	1,871,129	(11,130)	82,919	5,241
328	314	**Entreprise Minière et Chimique**[5]	France	Mining—potash; chemicals	1,438,514[e]	925,426[e]	(28,745)[e]	255,352[e]	12,224[e]
329	299	**AECI**	South Africa	Chemicals	1,432,306	1,339,150	127,581	626,098	27,400
330	337	**SSAB (Svenskt Stål)**[5]	Sweden	Metal manufacturing—steel	1,427,956	1,323,721	23,411	474,720	14,575
331	280	**Genstar**	Canada	Building materials	1,426,613	2,163,376	(68,319)	683,450	17,788
332	321	**Holderbank Financière Glaris**	Switzerland	Building materials	1,411,387[e]	3,005,718[e]	63,673[e]	709,378[e]	18,712[e]
333	381	**PETROPERU**[5]	Peru	Petroleum	1,395,758[10]	1,207,111[10]	6,323[10]	207,567[10]	8,740[10]
334	359	**Nippon Meat Packers**[27]	Japan	Food products	1,393,631	585,072	20,294	253,956	10,110
335	322	**Onoda Cement**[8]	Japan	Building materials	1,391,518	1,656,487	17,072	170,880	7,400
336	351	**Arthur Guinness**[7]	Britain	Beverages	1,387,271	999,755	(47,008)	333,986	18,703
337	313	**Empresa Nacional del Petróleo**[5]	Chile	Petroleum	1,384,829	1,261,697	50,757	641,545	3,587
338	•	**Imasco**[8]	Canada	Tobacco	1,380,667	1,551,391	99,368	482,625	37,000
339	329	**Domtar**	Canada	Paper, pulp and wood products; building materials	1,366,941	1,071,237	(1,297)	485,810	15,017
340	378	**Matra**[5]	France	Aerospace; motor vehicle parts	1,360,616[e]	1,830,302[e]	3,566[e]	245,438[e]	30,000[e]
341	336	**Hachette**	France	Publishing, printing	1,357,883[e]	731,067[e]	40,406[e]	155,260[e]	12,200[e]
342	352	**Sumitomo Metal Mining**[8]	Japan	Metal manufacturing—nonferrous	1,353,307	1,109,583	8,952	148,600	4,490
343	324	**Shiseido**[20]	Japan	Soaps, cosmetics	1,351,512	1,132,741	47,895	612,580	12,989
344	334	**Rowntree Mackintosh**	Britain	Food products	1,347,967	907,536	69,454	563,388	28,800
345	435	**Aisin Seiki**[8]	Japan	Motor vehicle parts	1,343,166	745,447	29,186	325,247	9,500
346	344	**Mitsui Petrochemical**[8]	Japan	Chemicals	1,342,535	1,404,681	(7,721)	146,985	5,107
347	340	**Continental Gummi-Werke**	Germany	Rubber products	1,337,992	806,863	8,207	162,575	27,631
348	323	**Oljekonsumenternas Förbund**	Sweden	Petroleum	1,332,468	651,778	14,345	64,008	5,721
349	326	**Svenska Cellulosa**	Sweden	Paper and wood products	1,329,367	1,499,234	36,293	313,789	15,583
350	364	**Nokia**	Finland	Metal products; rubber and paper prod.; electronics	1,329,039	1,331,948	11,904	210,063	23,957

•Not on last year's list.
N.A. Not available.
[e] Fortune estimate.

[30] Name changed from Tube Investments on May 24, 1982.

RANK	COMPANY	COUNTRY	INDUSTRY	SALES $000	ASSETS $000	NET INCOME $000	STOCK-HOLDERS' EQUITY $000	EMPLOYEES
351 330	**Abitibi-Price**	Canada	Paper, pulp and wood products	1,324,522	1,316,724	47,297	670,229	15,000
352 345	**Canadian General Electric**	Canada	Electronics, appliances	1,324,140[14]	768,398	35,745	374,791	15,869
353 334	**Alfa-Laval**	Sweden	Industrial and farm equipment	1,323,053	1,319,781	37,358	211,601	17,943
354 349	**SWEDYARDS (Svenska Varv)**[4]	Sweden	Shipbuilding	1,316,417	2,000,686	111,108	255,375	20,931
355 320	**Blue Circle Industries**	Britain	Building materials	1,312,452	2,107,930	127,536	1,238,094	N.A.
356 318	**ICL**[7]	Britain	Office equipment (includes computers)	1,303,380	913,336	22,238	192,665	28,796
357 366	**Meiji Seika**[8]	Japan	Food products; beverages; pharmaceuticals	1,301,483	678,361	20,150	275,074	5,643
358 356	**John Brown**[4]	Britain	Industrial equipment	1,300,966	805,561	1,414	203,442	10,040
359 358	**General Motors-Holden's**	Australia	Motor vehicles and parts	1,300,254	823,700	(128,782)	235,613	16,948
360 394	**SNECMA**[5]	France	Aerospace	1,299,663	2,394,007	(4,272)	208,197	21,394
361 327	**Whitbread**[12]	Britain	Beverages	1,295,802	2,016,229	91,442	1,454,215	39,496
362 395	**Kao Soap**[8]	Japan	Soaps, cosmetics	1,293,244	892,552	22,735	330,977	4,318
363 •	**Burns Philp**[9]	Australia	Building materials; food products	1,289,185	877,519	10,142	304,655	15,600
364 383	**Amatil**[18]	Australia	Tobacco; beverages; food products	1,284,424	671,932	49,390	307,766	12,700
365 393	**Molson**[8]	Canada	Beverages; chemicals	1,278,942	715,380	43,939	266,192	12,500
366 374	**ENSIDESA**[4]	Spain	Metal manufacturing—steel	1,278,515	2,535,079	(189,731)	307,217	22,506
367 371	**BTR**	Britain	Industrial equipment	1,268,264	1,057,544	102,533	512,940	25,700
368 470	**General Motors do Brasil**	Brazil	Motor vehicles and parts	1,262,031[14]	1,131,294	16,766	254,436	19,004
369 325	**Atlas Copco**	Sweden	Industrial equipment	1,260,216[6]	1,097,305[6]	31,999[6]	310,424[6]	18,402[6]
370 353	**Mitsui Mining & Smelting**[8]	Japan	Metal mfg.—nonferrous; fab. metal prod.	1,258,449	1,230,352	(21,816)	76,101	7,792
371 343	**S. Pearson & Son**	Britain	Publishing; ceramics	1,257,071	1,088,241	42,047	515,899	31,598
372 339	**De Beers Consolidated Mines**	South Africa	Mining—diamonds	1,256,409	4,800,329	395,030	3,859,658	19,245
373 449	**Suncor**	Canada	Petroleum	1,250,881	1,574,042	48,709	877,775	5,190
374 390	**Rheinische Braunkohlenwerke**	Germany	Mining—coal	1,249,616[10]	2,375,668[10]	6,178[10]	316,653[10]	17,346[10]
375 433	**W.C. Heraeus**	Germany	Metal manufacturing	1,242,955	327,068	7,954	121,130	6,396
376 357	**CII-Honeywell Bull**[5]	France	Office equipment (includes computers)	1,236,956	1,295,034	(206,457)	(6,949)	21,864
377 261	**Inco**	Canada	Mining—nickel; metal products	1,235,983	3,406,027	(204,213)	1,511,635	25,798
378 385	**Pioneer Electronic**[7,13]	Japan	Electronics, appliances	1,234,777	907,495	(12,651)	529,230	11,627
379 386	**TDK Electronics**[20]	Japan	Electronics, appliances	1,232,134	1,175,152	118,212	685,201	12,520
380 332	**Grundig**[6,13]	Germany	Electronics, appliances	1,231,252	1,496,722	(18,144)	168,474	31,492
381 372	**Thyssen-Bornemisza**	Neth. Antilles	Packaging; metal products; farm equipment	1,227,985	1,196,724	56,861	453,219	17,000
382 479	**Rauma-Repola**	Finland	Paper, pulp and wood products; metal products	1,226,085[10]	1,412,600[10]	(4,102)[10]	163,939[10]	19,019[10]
383 382	**Racal Electronics**[8]	Britain	Electrical equipment	1,225,892	1,104,398	133,236	472,127	19,000
384 397	**Konishiroku Photo Industry**[31]	Japan	Photographic equipment	1,223,746	1,079,609	50,953	376,451	8,917
385 365	**Kuraray**[8]	Japan	Chemicals	1,217,965	1,152,093	10,024	81,861	6,475
386 400	**Heineken**	Netherlands	Beverages	1,212,989[6]	1,419,024[6]	57,356[6]	657,619[6]	20,931[6]
387 391	**Morinaga Milk Industry**[8]	Japan	Food products; beverages	1,212,105[10]	473,224[10]	4,089[10]	65,186[10]	4,615[10]
388 389	**Hispanoil (Hispanica de Petróleos)**	Spain	Petroleum	1,204,658	264,671	3,465	49,028	257
389 328	**Dofasco**	Canada	Metal manufacturing—steel	1,204,001	2,127,327	51,717	881,158	12,700
390 360	**Nissan Diesel Motor**[8]	Japan	Motor vehicles	1,201,038[10]	651,453[10]	8,666[10]	145,027[10]	7,300[10]
391 368	**Valeo**	France	Motor vehicle parts	1,200,536	953,529	10,140	180,409	27,300
392 355	**Swedish Match**	Sweden	Paper, pulp, wood products; building materials	1,197,093	842,271	7,157	156,361	19,000
393 •	**Indústrias Votorantim**[12]	Brazil	Mining; metal manufacturing—nonferrous	1,182,973	1,500,089	163,004	1,030,990	52,304
394 396	**Tokyo Sanyo Electric**[20]	Japan	Electronics, appliances	1,175,312[10]	1,013,917[10]	28,354[10]	415,381[10]	10,112[10]
395 431	**ARBED Saarstahl**[32]	Germany	Metal manufacturing—steel	1,173,752[10]	1,715,439[10]	59,841[10]	138,772[10]	20,145[10]
396 379	**Zanussi Group**	Italy	Electronics, appliances	1,157,025[10]	N.A.	N.A.	58,352[10]	29,080[10]
397 377	**Nichiro Gyogyo**[20]	Japan	Food products	1,156,840	618,250	(1,959)	39,551	3,753
398 385	**Consolidated-Bathurst**	Canada	Paper, wood products; packaging	1,154,341	1,291,573	43,284	518,716	15,820
399 427	**Ito Ham Provisions**[12]	Japan	Food products	1,151,908	525,213	21,854	256,863	5,203
400 388	**Vickers**	Britain	Industrial equipment; motor vehicles	1,147,827	863,850	(3,499)	358,387	24,126

[31] Figures are for fiscal year ended April 20, 1982.
[32] Name changed from Stahlwerke Röchling-Burbach on July 1, 1982.

RANK '82	 '81	COMPANY	COUNTRY	INDUSTRY	SALES $000	ASSETS $000	NET INCOME $000	STOCKHOLDERS' EQUITY $000	EMPLOYEES
401	443	**Enso-Gutzeit**[5]	Finland	Paper and wood products	1,133,035	1,825,233	(36,393)	380,971	16,411
402	412	**Koninklijke Wessanen**	Netherlands	Food products	1,128,077[e]	346,252[e]	10,519[e]	133,570[e]	3,265[e]
403	401	**Motor Oil (Hellas) Corinth Refineries**	Greece	Petroleum	1,123,997	375,795	3,002	17,392	1,058
404	193	**Grupo Industrial Alfa**	Mexico	Metal manufacturing—steel; chemicals	1,123,604	667,336	(443,043)	84,283	33,951
405	402	**Bosch-Siemens Hausgeräte**	Germany	Electronics, appliances	1,122,192[10]	480,656[10]	5,354[10]	153,070[10]	12,700[10]
406	392	**Ford España**	Spain	Motor vehicles	1,120,024[14]	905,497	75,786	257,754	9,421
407	423	**Mitsubishi Rayon**[8]	Japan	Textiles; chemicals	1,118,442	912,145	12,460	116,568	3,661
408	444	**Mitsubishi Gas Chemical**[8]	Japan	Chemicals	1,113,669	970,997	21,253	228,814	4,600
409	430	**IMI**	Britain	Metal products; metal manufacturing—nonferrous	1,106,783	789,511	18,802	359,181	24,611
410	481	**Gulf Oil Great Britain**	Britain	Petroleum	1,102,540[e,14]	N.A.	(57,383)[e]	N.A.	N.A.
411	409	**Standard Telephones & Cables**	Britain	Electronics	1,099,584	774,999	70,341	336,282	22,882
412	387	**Anonima Petroli Italiana**	Italy	Petroleum	1,095,302	252,952	289	42,192	1,041
413	390	**Yoshida Kogyo**[8]	Japan	Building materials; metal products	1,088,813	1,591,351	60,828	345,732	13,939
414	375	**Turner & Newall**	Britain	Chemicals; motor vehicle parts	1,067,121	911,906	(125,012)	380,392	39,920
415	373	**Sanyo-Kokusaku Pulp**[8]	Japan	Paper, pulp and wood products	1,083,902[10]	1,178,840[10]	980[10]	100,322[10]	5,020[10]
416	398	**Nihon Cement**[25]	Japan	Building materials	1,081,524	1,471,293	9,727	156,099	3,355
417	422	**Wellcome Foundation**[22]	Britain	Pharmaceuticals	1,076,334	1,056,447	66,445	561,227	18,706
418	407	**ARBED**	Luxembourg	Metal manufacturing—steel	1,073,487[16]	1,814,760[10]	(93,641)[10]	350,551[10]	17,769[10]
419	434	**Ford Brasil**[19]	Brazil	Motor vehicles	1,070,839[14]	652,342	(21,806)	158,475	17,879
420	416	**PWA**	Germany	Paper and wood products	1,070,492[e]	742,002[e]	4,518[e]	105,014[e]	11,011[e]
421	455	**Oki Electric Industry**[8]	Japan	Electronics, appliances	1,067,678	979,650	15,960	142,272	15,093
422	382	**Snia Viscosa**	Italy	Chemicals; textiles; aerospace	1,063,931	1,500,117	0	97,009	15,140
423	451	**Zahnradfabrik Friedrichshafen**	Germany	Motor vehicle parts; industrial equipment	1,060,262	885,719	6,999	131,845	19,221
424	432	**Denki Kagaku Kogyo**[8]	Japan	Chemicals	1,052,360	1,120,589	(1,842)	170,767	5,776
425	408	**Kyowa Hakko Kogyo**	Japan	Chemicals; pharmaceuticals	1,050,882	1,000,358	22,309	250,226	5,848
426	424	**Esselte**[5]	Sweden	Office equipment; publishing, printing	1,041,557	902,016	30,535	172,056	16,148
427	404	**SEAT**[5]	Spain	Motor vehicles and parts	1,040,506	1,912,881	(215,295)	235,341	25,235
428	419	**Lesieur**	France	Food products; soaps	1,036,190[e]	513,621[e]	16,004[e]	135,966[e]	6,409[e]
429	420	**Linde**	Germany	Industrial equipment	1,034,845[e]	1,167,337[e]	18,383[e]	228,117[e]	15,094[e]
430	381	**Chevron Oil Belgium**	Belgium	Petroleum	1,031,623[14]	277,885	(138,363)	66,438	710
431	414	**Rütgerswerke**	Germany	Chemicals; building materials	1,027,599	522,252	9,095	138,446	11,132
432	•	**Prouvost**	France	Textiles	1,023,570[e]	606,004[e]	7,128[e]	109,441[e]	18,267[e]
433	428	**DRG**	Britain	Paper and wood products	1,013,979	595,100	175	144,973	20,841
434	442	**Freudenberg**	Germany	Chemicals; textiles	1,009,427[e]	N.A.	N.A.	N.A.	21,500[e]
435	448	**Nippon Seiko**[25]	Japan	Industrial equipment; motor vehicle parts	1,004,441	1,061,789	54,497	361,573	9,753
436	426	**Douwe Egberts**[7]	Netherlands	Food products; tobacco	1,000,937	569,040	48,063	290,978	6,064
437	425	**Kugelfischer Georg Schäfer**	Germany	Metal products	999,321	993,366	10,795	88,096	28,294
438	437	**Magirus-Deutz**	Germany	Motor vehicles	998,601[10]	633,604[10]	(77,836)[10]	111,436[10]	8,917[10]
439	415	**Toyoda Automatic Loom Works**[8]	Japan	Motor vehicles; industrial equipment	995,441[10]	681,428[10]	39,273[10]	405,754[10]	5,958[10]
440	476	**USIMINAS**[5]	Brazil	Metal manufacturing—steel	988,940	2,096,086[10]	(161,308)	358,868	15,407
441	454	**Toyo Soda Manufacturing**[8]	Japan	Chemicals	984,137	1,127,517	(58,563)	91,593	5,454
442	453	**Kanto Auto Works**[8]	Japan	Motor vehicles	983,625[10]	239,243[10]	4,629[10]	58,291[10]	5,939[10]
443	468	**Toyota Auto Body**[8]	Japan	Motor vehicles and parts	980,237[10]	294,405[10]	5,541[10]	79,076[10]	6,135[10]
444	405	**Yokohama Rubber**	Japan	Rubber products	977,732	673,545	(7,701)	77,906	10,960
445	439	**Citizen Watch**[8]	Japan	Watches, clocks	976,567	828,840	33,358	261,686	9,417
446	436	**Rengo**[8]	Japan	Paper and wood products	972,794	487,021	8,749	92,314	4,402
447	463	**NTN Toyo Bearing**[33]	Japan	Motor vehicle parts	970,856	875,111	42,949	241,861	7,571
448	•	**SIDOR (Siderúrgica del Orinoco)**[5]	Venezuela	Metal manufacturing—steel	965,047	6,286,747	(185,020)	2,993,641	15,544
449	318	**Butano**[5]	Spain	Petroleum	959,143[10]	353,643[10]	5,256[10]	144,668[10]	3,676[10]
450	466	**Boehringer Ingelheim**	Germany	Pharmaceuticals; chemicals	956,711[e]	1,093,384[e]	23,887[e]	397,813[e]	15,407[e]

•Not on last year's list.
N.A. Not available.
[e] Fortune estimate.
[33] Figures are for fiscal year ended March 20, 1982.

RANK '82	RANK '81	COMPANY	COUNTRY	INDUSTRY	SALES $000	ASSETS $000	NET INCOME $000	STOCKHOLDERS' EQUITY $000	EMPLOYEES
451	445	Lion	Japan	Chemicals; soaps, cosmetics	950,007	568,517	10,279	190,810	4,005
452	440	British Sugar[7]	Britain	Food products	946,920	1,004,837	82,047	796,694	5,267
453	457	Valmet[8]	Finland	Industrial, farm and transportation equipment	946,694	1,207,801	(54,385)	56,581	15,422
454	485	Nixdorf Computer	Germany	Office equipment (includes computers)	941,924[9]	1,042,137[9]	29,618[9]	243,178[9]	16,017[9]
455	459	Niigata Engineering[8]	Japan	Industrial equipment; shipbuilding	936,238	878,006	(6,037)	173,180	4,800
456	403	Petroliber[3]	Spain	Petroleum	934,924	525,383	5,539	80,954	850
457	469	Axel Springer[13]	Germany	Publishing, printing	931,503	335,741	6,178	81,870	11,484
458	458	Reemtsma Cigarettenfabriken	Germany	Tobacco; beverages	913,572	948,477	9,624	215,728	10,758
459	452	Steyr-Daimler-Puch	Austria	Motor vehicles	911,520[10]	849,009[10]	(36,039)[10]	233,566[10]	16,631[10]
460	•	Kymi Kymmene	Finland	Paper and wood products; electronics	905,586	1,247,552	(10,283)	308,129	16,034
461	413	Thomas Borthwick & Sons[7]	Britain	Food products	904,420	235,536	(2,739)	46,739	10,000
462	•	Royal Packaging Industries Van Leer	Netherlands	Fabricated metal prod.; paper, pulp and wood prod.	896,941	672,893	13,496	352,956	13,331
463	471	Carl-Zeiss-Stiftung[7]	Germany	Measuring and scientific equipment; glass	896,387	775,825	471	95,429	24,148
464	460	Albright & Wilson	Britain	Chemicals	893,951	496,449	2,346	280,550	6,637
465	309	Valores Industriales	Mexico	Beverages; food products; packaging	892,942	879,746	(87,346)	97,558	34,002
466	401	Delta Group	Britain	Electronics; metal products	886,731	598,272	6,421	281,465	19,775
467	410	Boliden	Sweden	Mining—nonferrous; metal mfg.; chemicals	882,226	697,291	20,866	110,602	8,563
468	411	Norddeutsche Affinerie[7,13]	Germany	Metal manufacturing—nonferrous	880,323[10]	260,470[10]	5,731[10]	75,524[10]	3,303[10]
469	498	Shionogi[8]	Japan	Pharmaceuticals	879,431	728,467	29,453	369,789	6,757
470	•	MTU	Germany	Motor vehicles; aerospace	877,718	911,985	670	84,329	12,907
471	472	SEITA[5]	France	Tobacco	877,184[10]	1,003,163[10]	(18,910)[10]	379,703[10]	8,781[10]
472	477	C. & J. Clark	Britain	Leather products	866,964[9]	381,296	20,531[9]	135,017	2,400
473	429	FMC[25]	Britain	Food products	864,579	111,586	(10,541)	12,203	5,200
474	•	SAGEM	France	Electronics; industrial equipment	863,361[9]	712,998[9]	9,232[9]	84,078[9]	7,787
475	490	Siderúrgica Nacional	Brazil	Metal manufacturing—steel	861,616[10]	3,861,658[10]	(188,208)[10]	934,922[10]	22,512[10]
476	497	Aichi Machine Industry[8]	Japan	Motor vehicles and parts	856,993[10]	338,708[10]	5,760[10]	62,298[10]	4,720[10]
477	441	Scottish & Newcastle Breweries[25]	Britain	Beverages	855,298	1,027,531	35,856	565,088	23,360
478	488	Elkem	Norway	Metal manufacturing	849,834	697,535	(44,267)	86,714	11,154
479	•	Daicel Chemical Industries[8]	Japan	Chemicals	841,154	716,886	14,337	135,867	3,987
480	478	Tootal Group[18]	Britain	Textiles	831,063	562,018	(40,795)	211,486	19,869
481	•	Prima Meat Packers[8]	Japan	Food products	829,364	303,816	2,032	62,862	4,800
482	474	Dillinger Hüttenwerke	Germany	Metal manufacturing—steel	827,321[10]	562,218[10]	2,543[10]	180,187[10]	5,669[10]
483	480	Showa Sangyo[17]	Japan	Food products	826,272	417,797	476	112,746	2,016
484	486	Topy Industries[8]	Japan	Metal manufacturing—steel; motor vehicle parts	823,768	541,985	5,444	47,263	4,168
485	•	Toyo Rubber Industry	Japan	Rubber products; chemicals	817,689	712,126	(3,578)	66,280	7,500
486	•	Schindler Holding	Switzerland	Transportation equipment	817,281	596,912	20,172	222,615	21,575
487	446	AGA	Sweden	Chemicals, gases; industrial equipment	814,491	775,349	14,616	172,244	11,833
488	495	A. Ahlström	Finland	Paper and wood products	814,201	999,672	6,368	183,138	13,274
489	•	Syntex[27]	Panama	Pharmaceuticals	808,371	859,153	134,015	601,319	10,400
490	•	Wärtsilä	Finland	Shipbuilding; industrial equipment; building mat.	802,600	1,532,130	12,486	143,324	16,831
491	•	Pernod Ricard	France	Beverages	802,268[9]	860,800[9]	53,268[9]	426,109[9]	7,188[9]
492	466	Georg Fischer	Switzerland	Motor vehicle parts; industrial equipment	799,992	751,681	(5,412)	244,583	15,542
493	487	Carnaud	France	Metal products	799,616[9]	551,033[9]	7,115[9]	90,119[9]	11,899[9]
494	456	Dollfus-Mieg	France	Textiles	798,470[9]	587,264[9]	(1,061)[9]	83,802[9]	15,940[9]
495	475	Dansk Esso	Denmark	Petroleum	795,857	254,442	22,789	76,467	1,011
496	464	Du Pont Canada	Canada	Chemicals; textiles	794,262[10]	469,004	(10,593)	198,219	5,432
497	•	United Breweries[7]	Denmark	Beverages	793,673[9]	709,139[9]	36,770[9]	201,072[9]	12,400[9]
498	484	Eschweiler Bergwerks-Verein	Germany	Mining—coal	790,451	800,678	892	90,746	19,173
499	462	Usines Chausson	France	Motor vehicles and parts	787,161[9]	465,592[9]	(27,400)[9]	36,962[9]	14,623[9]
500	491	Incentive	Sweden	Measuring and scientific equip.; industrial equip.	786,723	571,286	10,461	72,081	11,213
		TOTALS			1,806,807,939	1,493,580,058	19,347,623	426,344,109	18,123,772

CHANGES IN SALES

THE TEN BIGGEST INCREASES

	SALES RANK	
Sunkyong	62	223.0%
Kymi Kymmene	460	84.2
Indústrias Votorantim	393	72.8
Imasco	338	68.3
Australian Consolidated Industries	259	60.1
Jacobs Suchard	245	53.2
Chrysler Canada	158	43.3
Rauma-Repola	382	39.6
John Labatt	311	37.1
General Motors do Brasil	368	36.3

THE TEN BIGGEST DECREASES

Hoogovens Groep	221	61.3%
Grupo Industrial Alfa	404	56.0
Statsföretag Group	285	45.9
Valores Industriales	465	44.6
Pechiney Ugine Kuhlmann	106	41.5
Kuwait Petroleum	31	40.5
Inco	377	33.4
TI Group	306	31.7
Johnson Matthey	322	30.6
Métallurgie Hoboken-Overpelt	274	24.5

THE INDUSTRY MEDIANS

	INCREASES
Shipbuilding, transportation equipment	9.8%
Aerospace	7.1
Office equipment (includes computers)	3.4
	DECREASES
Mining	8.2%
Rubber products	7.1
Textiles	6.2
Chemicals	5.9
Paper and wood products	5.6
Building materials	5.2
Metal manufacturing	4.8
Publishing, printing	3.9
Tobacco	3.8
Industrial and farm equipment	3.5
Petroleum	2.8
Electronics, appliances	2.8
Metal products	1.4
Food products	1.1
Motor vehicles and parts	1.1
Measuring and scientific equipment	.6
Pharmaceuticals	.5
Beverages	.2

CHANGES IN PROFITS

THE TEN BIGGEST INCREASES*

	SALES RANK	
Steel Authority of India	171	35712.3%
Esso Nederland	231	3344.4
Hachette	341	2068.9
Eschweiler Bergwerks-Verein	498	1758.3
Delta Group	466	831.9
Arla	323	378.2
Dansk Esso	495	304.2
PETROPERU	333	265.3
Dillinger Hüttenwerke	482	240.4
Sunkyong	62	240.1

THE TEN BIGGEST DECREASES*

John Brown	358	96.9%
DRG	433	96.7
Showa Sangyo	483	94.2
Albright & Wilson	464	92.2
Mitsubishi Chemical Industries	96	90.9
Koa Oil	168	90.0
Thomas Tilling	117	88.3
Matra	340	87.9
Petro-Canada	172	84.2
Lafarge Coppée	192	83.0

*Listings exclude money losers.

THE INDUSTRY MEDIANS

	INCREASES
Shipbuilding, transportation equipment	74.0%
Tobacco	30.6
Mining	13.4
Office equipment (includes computers)	10.6
Publishing, printing	6.6
Pharmaceuticals	5.8
Measuring and scientific equipment	1.2
	DECREASES
Rubber products	78.3%
Paper and wood products	53.1
Aerospace	49.8
Petroleum	33.5
Chemicals	30.4
Metal manufacturing	29.1
Industrial and farm equipment	16.9
Textiles	15.3
Beverages	15.1
Building materials	14.8
Motor vehicles and parts	9.1
Metal products	5.9
Electronics, appliances	4.9
Food products	1.8

ARRIVALS AND DEPARTURES

NEWCOMERS AND RETURNEES*

	1982 SALES RANK
Burns Philp	363
Daicel Chemical Industries	479
EFIM	193
IBM Japan	250
Imasco (1978: 435)	338
Indústrias Votorantim	393
IRI	4
Jacobs Suchard	245
Kymi Kymmene (1976: 471)	460
MTU (1980: 488)	470
Mitsubishi Mining & Cement (1979: 308)	319
NOVA, AN ALBERTA CORP.	165
Pernod Ricard (1980: 481)	491
Prima Meat Packers (1979: 469)	481
Prouvost	432
Royal Packaging Industries Van Leer (1976: 477)	462
SAGEM	474
Schindler Holding (1980: 494)	486
SIDOR (Siderúrgica del Orinoco) (1978: 472)	448
Syntex	489
Tarmac (1976: 253)	265
Toyo Rubber Industry	485
United Breweries (1979: 455)	497
Wärtsilä (1977: 490)	490

*Figures in parentheses indicate year and sales rank the last time the company was listed.

DEPARTURES

	1981 SALES RANK
AE	465
Alfa Romeo[1]	277
Altos Hornos de México	438
BPB Industries	489
Cehave	492
Chloride Group	500
Chrysler de México	363
Coalite Group	494
Dalmine[1]	447
Ford Motor (Mexico)[2]	348
Husky Oil[1]	376
Italsider[1]	135
Jacobs[1]	367
Korea Oil[1]	129
MIM Holdings	493
Mo och Domsjö	496
Redland	473
Rijn-Schelde-Verolme[3]	369
Siderúrgica Paulista	482
Smiths Industries	499
Stora Kopparbergs Bergslags	467
Sumitomo Light Metal Industries	488
Tiger Oats & National Milling[1]	417
Zambia Industrial & Mining	178

[1] The company's figures are consolidated in another listed company.

[2] The company no longer publishes results.

[3] The company's results are not yet published.

THE MONEY LOSERS

	SALES RANK	LOSS $000
YPF (Yacimientos Petrolíferos)*	104	3,669,510
ENI*	3	1,206,970
British Steel*	59	963,094
Usinor*	111	694,437
Montedison*	57	634,664
Michelin*	78	632,935
Sacilor*	105	541,300
BL*	85	512,420
Pechiney Ugine Kuhlmann*	106	455,285
Grupo Industrial Alfa*	404	443,043
Massey-Ferguson*	239	413,195
Maruzen Oil*	47	406,035
Unión Explosivos Río Tinto	300	379,846
Peugeot*	33	326,637
Statsföretag Group*	285	310,971
Dome Petroleum	208	299,307
EFIM*	193	287,798
Texaco (Britain)	136	260,885
Cockerill Sambre*	140	250,432
Rolls-Royce*	179	234,429
SEAT*	427	215,295
CII-Honeywell Bull*	376	205,457
Inco*	377	204,213
Renault*	15	194,796
ENSIDESA*	366	189,731
Siderúrgica Nacional*	475	188,208
SIDOR (Siderúrgica del Orinoco)*	448	185,020
USIMINAS	440	181,308
Deutsche Babcock	215	181,090
Mobil Oil (Britain)*	257	166,242
Mitsubishi Oil	89	164,189
Idemitsu Kosan	30	154,801
Dunlop Holdings*	175	139,958
Chevron Oil Belgium*	430	138,363
Thomson-Brandt*	50	136,029
General Motors-Holden's	359	128,782
Rhône-Poulenc*	77	128,344
Turner & Newall*	414	125,612
TI Group*	306	104,968
Canada Development Corp.	145	101,935
Daikyo Oil	87	101,242
IMETAL	269	97,529
Volkswagenwerk	18	95,813
ARBED*	418	93,641
Guest Keen & Nettlefolds*	141	90,448
ALUSUISSE (Swiss Aluminium)*	148	88,068
Fuji Kosan	304	87,907
Ford Motor of Canada*	68	87,369
Valores Industriales	465	87,346
Française des Pétroles	6	80,595
Magirus-Deutz*	438	77,838
Mobil Oil (Germany)	110	70,549
DSM	54	70,222
Genstar	331	68,319
Vauxhall Motors*	258	67,739
Noranda Mines	219	67,224
Toyo Soda Manufacturing	441	58,563
General Motors of Canada*	45	58,099
Alcan Aluminium	102	58,000
Gulf Oil Great Britain*	410	57,383
Valmet*	453	54,385
Schneider*	66	53,542
Arthur Guinness	336	47,008
MacMillan Bloedel	315	46,473
Esso Italiana	127	44,358
Elkem*	478	44,267
Nippon Light Metal	298	41,970
Tootal Group*	480	40,795
British Aerospace	130	40,413
Hoogovens Groep*	221	39,791
Mitsui Toatsu Chemicals*	243	37,772
Nippon Mining	76	36,831
Mitsubishi Petrochemical*	305	36,474
Enso-Gutzeit	401	36,393
Saarbergwerke	184	36,281
Steyr-Daimler-Puch	459	36,039
Metal Box*	216	34,148
Stelco	289	33,071
AEG-Telefunken	83	29,300
British Shipbuilders*	248	29,193
Entreprise Minière et Chimique*	328	28,745
Hiram Walker Resources	191	28,414
Sumitomo Chemical	166	28,123
Thyssen*	28	27,449
Usines Chausson*	499	27,400
Kawasaki Heavy Industries	120	24,525
Veba Oel	46	23,549
Iscor	183	22,404
Kanebo*	222	22,322
Mitsui Mining & Smelting*	370	21,816
Ford Brasil	419	21,806
Klöckner-Werke*	213	21,179
Grundig*	380	19,144
SEITA*	471	18,910
Chevron Oil Italiana*	272	18,243
Salzgitter*	116	15,785
VOEST-Alpine*	90	14,948
Unitika*	293	13,946
Pioneer Electronic	378	12,651
Mobil Oil Française*	270	12,151
Sandvik Group	318	11,292
Taiyo Fishery	100	11,166
Daishowa Paper	327	11,130
Du Pont Canada*	496	10,593
FMC*	473	10,541
Empresa Colombiana de Petróleos	228	10,349
Kymi Kymmene	460	10,283
Esso (France)	73	10,204
Mitsui Petrochemical	346	7,721
Yokohama Rubber*	444	7,701
Babcock International	271	7,638
Niigata Engineering	455	6,037
Georg Fischer*	492	5,412
SNECMA*	360	4,272
Rauma-Repola	382	4,102
Toyo Rubber Industry	485	3,578
Vickers	400	3,499
Thomas Borthwick & Sons*	461	2,739
Nichiro Gyogyo	397	1,959
Dollfus-Mieg*	494	1,861
Denki Kagaku Kogyo	424	1,842
Domtar	339	1,297
Showa Denko*	292	1,120

*Also lost money in 1981.

THE 500 BY COUNTRY

	RANK BREAKDOWN								
	1-100	101-200	201-300	301-400	401-500	TOTAL	LARGEST COMPANY	$000	RANK
Argentina	0	1	0	0	0	1	YPF (Yacimientos Petrolíferos)	4,454,824	104
Australia	1	1	1	4	0	7	Broken Hill Proprietary	5,433,794	84
Austria	1	1	0	0	1	3	VOEST-Alpine	5,246,368	90
Belgium	1	3	1	0	1	6	Petrofina	9,208,978	37
Brazil	1	0	1	2	3	7	Petrobás (Petróleo Brasileiro)	19,004,997	7
Britain	14	21	22	16	14	87	British Petroleum	51,322,452	2
Britain/Netherlands	1	0	0	0	0	1	Unilever	23,120,471	5
Canada	4	9	8	12	1	34	Canadian Pacific	9,960,276	36
Chile	0	0	1	1	0	2	CODELCO-CHILE	1,659,642	286
Colombia	0	0	1	0	0	1	Empresa Colombiana de Petróleos	2,151,307	228
Denmark	0	0	0	0	2	2	Dansk Esso	795,857	495
Finland	0	1	0	2	5	8	Neste	3,633,876	129
France	11	9	6	7	8	41	Française des Pétroles	20,029,197	6
Germany	17	10	9	6	17	59	Siemens	16,962,630	9
Greece	0	0	0	0	1	1	Motor Oil (Hellas) Corinth Refineries	1,123,997	403
India	1	1	0	0	0	2	Indian Oil	7,833,291	43
Israel	0	1	0	0	0	1	Koor Industries	2,900,000	160
Italy	4	3	2	1	2	12	ENI	27,505,858	3
Italy/Switzerland	0	1	0	0	0	1	Pirelli	4,209,553	108
Japan	23	23	33	29	26	134	Nissan Motor	16,465,167	10
Kuwait	1	0	0	0	0	1	Kuwait Petroleum	12,234,457	31
Luxembourg	0	0	0	0	1	1	ARBED	1,073,487	418
Mexico	1	0	0	0	2	3	Pemex (Petróleos Mexicanos)	14,852,721	21
Netherlands	3	0	2	1	3	9	Philips' Gloeilampenfabrieken	16,092,759	13
Netherlands Antilles	1	0	0	1	0	2	Schlumberger	6,025,380	65
Netherlands/Britain	1	0	0	0	0	1	Royal Dutch/Shell Group	83,759,375	1
New Zealand	0	0	0	1	0	1	Fletcher Challenge	1,523,590	308
Norway	0	2	0	0	1	3	Norsk Hydro	3,182,773	151
Panama	0	0	0	0	1	1	Syntex	808,371	489
Peru	0	0	0	1	0	1	PETROPERU	1,395,758	333
Philippines	0	1	0	0	0	1	Philippine National Oil	2,889,796	162
Portugal	0	1	0	0	0	1	PETROGAL (Petróleos de Portugal)	2,453,861	200
South Africa	1	1	0	4	0	6	Barlow Rand	5,895,746	69
South Korea	4	1	4	0	0	9	Hyundai Group	8,035,836	41
Spain	1	1	3	2	4	11	ENPETROL	4,754,460	98
Sweden	2	3	2	9	4	20	Volvo	12,027,234	32
Switzerland	3	3	3	1	2	12	Nestlé	13,610,690	25
Taiwan	1	0	1	0	0	2	Chinese Petroleum	5,361,246	79
Turkey	1	2	0	0	0	3	Türkiye Petrolleri	5,465,580	81
Venezuela	1	0	0	0	1	2	Petróleos de Venezuela	16,451,136	11

THE 100 LARGEST COMMERCIAL BANKING COMPANIES OUTSIDE THE U.S.

RANKED BY ASSETS

For the first time in a decade, no West German bank is among the top ten commercial banking companies outside the U.S. The largest West German bank, Deutsche Bank, No. 7 in last year's rankings, slipped to No. 11 this year—victim, along with the other ten West German banks in this directory, of Poland's financial crisis and the deutsche mark's weakness relative to the dollar. The West German banks are Poland's largest lenders and have set aside huge sums against losses on troubled loans; they won't say how much. A flood of bankruptcies—1,200 West German companies went belly up in 1982—added to the banks' burdens.

For the 100 banks as a group, total assets, denominated in dollars, declined 0.4% from 1981, and net income dropped 9.3%. It was the first time since FORTUNE started ranking banks in 1968 that total assets and net income decreased.

The dollar's strength relative to the yen masks the good performance of the 24 Japanese banks, the largest national group in the rankings. Their assets rose only 6.4% in dollars, but 20.8% in yen. Since Japan had a low inflation rate—only 2.7%—most of the yen gains were real.

Once again four of the top ten banks are French, a consequence of France's banking industry being highly concentrated. With the addition this year of Crédit Industriel et Commercial (CIC), No. 62, and Banque Française du Commerce Extérieur, No. 84, there are now 11 French banks among the 100. Banque Française du Commerce Extérieur, which finances exports, became eligible for ranking for the first time because more than 50% of its assets are now in commercial banking. CIC qualifies, also for the first time, because its figures are no longer consolidated with those of Cie Financière de Suez, which was CIC's majority stockholder until Suez was nationalized last year. CIC is also government owned, but is not part of Suez.

Two Arab banks made it into the ranks of the 100 this year: Rafidain Bank, No. 81, and National Commercial Bank of Saudi Arabia, No. 95. Thanks to the nation's huge dollar reserves, the insulated Saudi economy continued to prosper despite dropping oil prices. The Iraqi newcomer, Rafidain, supplying figures for the first time, made an especially splashy entrance. The government-owned institution—the only commercial bank in Iraq—finances all of the country's international trade and reported the highest net income of any bank ranked, $766,267,000.

Two of the seven departures from the rankings between last year and this resulted from singular banking dramas. Banco Ambrosiano (No. 96 last year) was liquidated in the wake of a well-publicized scandal that involved the Vatican and the mysterious death-by-hanging of Chairman Roberto Calvi under Blackfriar's Bridge in London. The successor institution, Nuovo Banco Ambrosiano, controlled by government-owned banks, did not get its numbers together in time to be ranked.

A departing Belgian bank was listed in the 1982 directory as Algemene Spaar-en Lijfrentekas, the government-owned bank's historic Flemish name, and ranked No. 74. Since 1865 the bank has also had a French name, Caisse Générale d'Epargne et de Retraite. In the identity crisis lies part of the explanation of why the bank is no longer ranked. It has set up separate banking and insurance operations, with separate boards. But the government must approve members of the two new boards, and French-Flemish tussling has stalled the restructuring. Last year's No. 74 is operating in limbo, without settled name, board, or figures.

—MARGARET A. ELLIOTT

RANK		BANK
'82	'81	
1	1	Banque Nationale de Paris[7]
2	2	Caisse Nationale de Crédit Agricole[7]
3	3	Crédit Lyonnais[7]
4	5	Barclays Bank
5	4	Dai-Ichi Kangyo Bank[9,10]
6	9	National Westminster Bank
7	11	Fuji Bank[9,10]
8	6	Société Générale[7]
9	10	Mitsubishi Bank[9,10]
10	8	Sumitomo Bank[9,10]
11	7	Deutsche Bank[11]
12	13	Sanwa Bank[9,10]
13	12	Midland Bank
14	15	Bank of Tokyo[10]
15	14	Royal Bank of Canada[13]
16	17	Industrial Bank of Japan[9,10]
17	16	Banco do Brasil[7]
18	18	Norinchukin Bank[10,12]
19	21	Mitsui Bank[9,10]
20	25	Hongkong & Shanghai Banking
21	19	Dresdner Bank[11]
22	23	Westdeutsche Landesbank Girozentrale[7]
23	24	Tokai Bank[9,10]
24	22	Canadian Imperial Bank of Commerce[13]
25	27	Lloyds Bank
26	28	Union Bank of Switzerland[10]
27	29	Cie Financière de Paris et des Pays-Bas[7]
28	30	Long-Term Credit Bank of Japan[9,10]
29	26	Bank of Montreal[13]
30	32	Swiss Bank Corp.[10]
31	33	Taiyo Kobe Bank[9,10]
32	37	Banca Nazionale del Lavoro
33	31	Algemene Bank Nederland
34	39	Mitsubishi Trust & Banking[9,10]
35	34	Commerzbank[11]
36	38	Bayerische Vereinsbank[11]
37	40	Bank of Nova Scotia[13]
38	45	Sumitomo Trust & Banking[9,10]
39	36	Amsterdam-Rotterdam Bank
40	35	Rabobank
41	48	Mitsui Trust & Banking[9,10]
42	42	Bayerische Landesbank Girozentrale[10]
43	50	Banca Commerciale Italiana[7]
44	44	Daiwa Bank[9,10]
45	46	Standard Chartered Bank
46	43	Bayerische Hypotheken- und Wechsel-Bank[11]
47	49	Toronto-Dominion Bank[13]
48	41	Credit Suisse[10]
49	62	Cassa di Risparmio delle Provincie Lombarde[10]
50	51	Istituto Bancario San Paolo di Torino

[1] Asset figures have been converted into U.S. dollars using the market rate prevailing at each bank's fiscal year-end, which is December 31, 1982, unless otherwise noted. Figures for subsidiaries are included if they are more than 50% owned, unless otherwise noted. Daiwa Bank, Mitsubishi Trust & Banking, Mitsui Trust & Banking, Sumitomo

COUNTRY	ASSETS[1]	INCREASE (DECREASE)		DEPOSITS[2]		LOANS[3]	NET INCOME[4]	STOCKHOLDERS' EQUITY[5]	OFFICES[6]	EMPLOYEES
	$000	IN U.S. DOLLARS PERCENT	IN LOCAL CURRENCIES PERCENT	$000	RANK	$000	$000	$000		
France	109,699,593	1.66	20.52	92,151,840	1	79,779,377	183,752	1,188,554	2,580	59,989
France	98,257,480	(0.59)	17.86	81,436,988	4	58,855,727	173,859	3,127,083	13,657	70,790
France	96,519,243	1.66	20.77	81,749,926	3	75,433,166	122,272	1,027,882	2,287	45,471
Britain	96,596,429	2.33	21.12	82,825,420	2	70,695,274	575,226	4,472,152	5,227	140,806[e]
Japan	94,115,184	0.67	16.14	69,442,061	9	52,553,545	161,004	1,627,041	347	23,684
Britain	88,180,966	6.31	25.82	81,217,128	5	68,632,476	696,289	4,130,754	3,836	88,500
Japan	87,405,035	8.70	25.41	64,010,821	10	46,693,578	260,478	1,779,720	254	17,778
France	86,550,942	(2.83)	15.06	74,487,522	7	66,052,762	139,286	972,790	2,613	46,462
Japan	85,428,960	5.69	21.93	61,847,540	13	43,951,668	188,606	1,644,324	217	16,772
Japan	85,143,224	2.06	17.75	63,112,143	12	43,942,799	272,559	1,792,060	233	15,500
Germany	83,757,341	(2.56)	3.51	76,444,746	6	69,454,338	135,052	2,617,600	1,378	45,618
Japan	79,251,814	8.36	26.00	60,216,326	14	44,382,584	159,081	1,447,078	270	17,192
Britain	77,663,029	(1.12)	17.03	71,565,596	8	55,008,440	252,973	2,526,831	3,384	91,400[e]
Japan	75,202,609	11.08	30.37	49,679,885	20	34,703,369	124,987	1,043,566	270	14,736
Canada	72,144,191	(0.83)	1.07	63,947,037	11	49,167,653	291,684	2,351,666	1,568	39,757
Japan	6[illegible],916,362	3.30	19.18	52,178,449	17	36,947,570	192,567	1,343,317	26	5,370
Brazil	61,739,055	(5.13)	87.57	23,984,145	56	54,904,005	657,630	4,632,273	1,874	119,413
Japan	59,917,464	(1.19)	16.03	53,064,006	16	31,779,023	39,162	323,332	38	3,064
Japan	59,300,619	4.03	20.02	44,542,881	24	32,019,437	104,348	963,530	201	12,284
Hong Kong	58,516,358	8.87	24.66	51,771,451	19	28,161,173	386,166	2,408,333	1,100	10,000[e]
Germany	57,800,903	(1.62)	4.54	53,714,381	15	46,749,075	82,957	1,591,240	1,150	30,949
Germany	56,909,684	0.73	7.03	52,013,566	18	46,429,965	33,211	1,653,293	13	7,224
Japan	55,883,313	1.61	17.23	43,006,306	27	31,101,614	103,110	977,499	248	14,050
Canada	55,816,207	0.45	2.38	49,156,964	21	43,699,767	229,042	1,940,769	1,882	34,956
Britain	55,751,426	5.25	24.57	49,135,424	22	51,366,646	424,246	3,158,336	3,069	70,229
Switzerland	52,977,904	1.06	13.46	45,218,607	23	39,916,995	215,273	2,727,186	244	16,966
France	51,465,579	1.58	20.44	29,521,513	47	33,579,377	76,976	1,338,131	1,066	26,810
Japan	51,337,296	2.84	18.41	41,322,031	32	30,240,048	117,663	1,113,030	24	3,607
Canada	50,588,830	(4.56)	(2.75)	43,939,830	25	35,953,076	209,637	1,888,795	1,259	29,866
Switzerland	48,227,246	(1.61)	10.66	42,452,723	29	35,808,431	181,761	2,513,902	210	14,332
Japan	47,420,839	(0.13)	15.22	37,297,149	37	27,265,799	73,478	837,682	350	16,232
Italy	47,276,566	23.87	42.66	41,322,546	31	29,269,666	46,628	1,534,396	387	23,966
Netherlands	47,212,780	(5.47)	1.06	42,813,842	28	26,821,062	134,063	1,193,304	947	28,453
Japan	46,627,585	9.46	26.32	40,285,348	33	23,665,002	49,718	605,919	56	6,445
Germany	45,514,818	0.52	6.81	43,191,753	26	39,045,555	42,969	1,130,647	877	21,393
Germany	44,395,119	1.06	7.37	41,801,067	30	38,712,225	59,778	880,368	471	12,641
Canada	43,740,710	4.95	6.97	38,549,189	35	28,550,572	222,332	1,367,501	1,211	26,133
Japan	42,686,274	12.15	29.36	37,561,580	36	22,596,133	50,471	603,716	57	6,346
Netherlands	42,600,454	(4.56)	2.05	39,942,598	34	24,320,568	61,136	1,091,463	871	23,797
Netherlands	41,966,013	(6.71)	(0.26)	34,878,202	40	25,562,083	163,054	1,966,846	3,051	28,020
Japan	41,292,356	10.48	27.46	34,569,042	41	22,106,802	41,277	502,889	51	5,829
Germany	40,343,127	(0.61)	5.61	33,603,082	43	32,192,641	54,969	931,876	5	4,018
Italy	39,962,614	8.21	24.62	35,051,497	39	22,739,010	65,874	1,496,752	512	22,860
Japan	39,678,364	2.40	18.24	32,809,826	44	21,641,103	61,002	633,267	179	11,097
Britain	39,328,079	3.61	22.62	34,315,191	42	32,702,531	197,340	1,845,653	1,664	55,943
Germany	38,716,790	(2.90)	3.16	36,448,973	38	33,682,132	53,160	763,154	526	11,481
Canada	36,733,019	(1.50)	0.39	32,278,273	45	26,531,249	250,840	1,429,459	1,005	18,333
Switzerland	36,611,278	(11.03)	(0.11)	31,081,871	46	26,362,054	149,053	2,354,787	175	12,496
Italy	32,232,181	25.49	44.52	25,239,388	52	18,429,056	44,009	1,646,091	525	13,278
Italy	31,234,810	(12.51)	0.76	24,649,846	55	11,898,446	258,310	1,846	470	13,882

Trust & Banking, Toyo Trust & Banking, Yasuda Trust & Banking, and Chuo Trust & Banking include holdings of major trusts in their assets.

[2] Deposit figures have been converted into U.S. dollars using the market rate as of each bank's fiscal year-end. Figures for all German banks include their own bonds; so do the figures for Bank of Tokyo, Industrial Bank of Japan, Long-Term Credit Bank of Japan, and Norinchukin Bank. Banco do Brasil includes funds for refinancing. Figures for Swiss banks include medium-term notes.

[3] Loan figures have been converted to U.S. dollars using the market rate prevailing at each bank's fiscal year-end. Figures include loans to banks and at call or available on short notice.

[4] Net income figures have been converted into U.S. dollars using the average rate in the official exchange market during the bank's fiscal year. Net income is after taxes and excludes minority interest.

THE 100 LARGEST COMMERCIAL BANKING COMPANIES OUTSIDE THE U.S.

RANK '82	RANK '81	BANK	COUNTRY	ASSETS[1] $000	INCREASE (DECREASE) IN U.S. DOLLARS PERCENT	INCREASE (DECREASE) IN LOCAL CURRENCIES PERCENT	DEPOSITS[2] $000	DEPOSITS[2] RANK
81	53	Nippon Credit Bank[9,10]	Japan	30,606,619	1.78	17.42	25,209,228	53
82	52	Société Générale de Banque	Belgium	30,551,173	(3.71)	17.77	27,356,674	49
83	57	Yasuda Trust & Banking[9,10]	Japan	30,514,879	6.69	23.09	26,243,738	50
84	56	Kyowa Bank[9,10]	Japan	29,708,107	(0.67)	14.60	23,435,199	58
85	47	Banco di Roma[7]	Italy	29,344,740	16.62	34.31	24,735,781	54
86	55	Deutsche Genossenschaftsbank[11]	Germany	29,272,896	0.85	7.16	27,748,149	48
87	20	Cie Financière de Suez[7,14¶]	France	29,249,703	N.A.	N.A.	18,229,822	69
88	54	Credito Italiano[7]	Italy	28,568,639	(4.59)	(9.88)	25,801,719	51
89	58	Monte dei Paschi di Siena	Italy	28,542,036	1.22	16.57	23,899,126	57
90	61	Hessische Landesbank-Girozentrale-[11]	Germany	27,185,459	3.01	9.46	22,646,467	60
61	63	Saitama Bank[9,10]	Japan	26,536,813	2.38	18.12	21,420,060	65
62	•	Crédit Industriel et Commercial[7,14]	France	25,930,498	N.A.	N.A.	21,677,795	63
63	68	Norddeutsche Landesbank Girozentrale[7,11]	Germany	24,993,696	8.09	14.85	22,960,439	59
64	70	Toyo Trust & Banking[9,10]	Japan	24,012,311	5.66	21.90	21,459,679	64
65	64	Bank für Gemeinwirtschaft	Germany	23,725,676	(7.74)	(1.97)	22,353,342	61
66	60	Commonwealth Banking[7,15]	Australia	23,428,466	1.63	14.13	16,433,318	75
67	78	Bank Leumi le-Israel[11]	Israel	23,296,369	14.56	146.21	18,112,872	70
68	75	Hokkaido Takushoku Bank[9,10]	Japan	22,956,735	7.44	23.98	16,449,855	74
69	71	Nederlandsche Middenstandsbank	Netherlands	22,685,848	0.33	7.27	21,758,563	62
70	72	Groupe des Banques Populaires	France	22,336,576	(1.12)	17.23	16,802,374	73
71	83	Bank Hapoalim	Israel	22,157,201	16.20	151.77	14,789,107	77
72	86	Banque Bruxelles Lambert[6]	Belgium	21,542,533	(13.11)	11.79	18,523,179	68
73	79	Bank of Yokohama[9,10]	Japan	20,596,761	2.12	17.81	16,960,488	71
74	67	Kredietbank[13]	Belgium	20,441,649	(14.87)	12.10	18,793,316	67
75	84	Creditanstalt-Bankverein	Austria	20,195,598	6.83	13.05	18,561,537	66
76	81	Australia & New Zealand Banking Group[7]	Australia	19,682,221	2.74	23.66	13,368,378	83
77	•	National Australia Bank[9]	Australia	19,480,681	64.97	98.56	13,325,445	85
78	77	Crédit Communal de Belgique	Belgium	19,357,504	(7.04)	13.71	16,920,381	72
79	73	Skandinaviska Enskilda Banken	Sweden	19,092,066	(15.44)	12.59	13,341,860	84
80	59	Banco di Napoli[7]	Italy	18,979,344	1.87	17.09	16,749,549	76
81	•	Rafidain Bank[7]	Iraq	18,563,898	2.77	8.18	1,661,327	100
82	80	State Bank of India[7]	India	18,181,806	7.29	13.06	14,477,891	78
83	80	Crédit Mutuel	France	18,168,222	(8.76)	8.17	14,366,802	79
84	•	Banque Française du Commerce Extérieur[7]	France	17,296,749	13.07	34.06	9,556,960	99
85	85	Svenska Handelsbanken	Sweden	16,427,497	(12.41)	16.63	12,603,694	90
86	91	Banco Central[10]	Spain	16,408,011	1.38	31.13	13,746,067	81
87	87	Post-och Kreditbanken[7]	Sweden	16,035,937	(10.92)	18.61	10,517,628	98
88	•	Consorzio de Credito per le Opere Pubbliche[7]	Italy	16,015,389	(13.33)	(0.18)	13,152,116	88
89	95	Crédit Commercial de France[7,16]	France	15,561,596	10.02	30.43	13,082,329	89
90	90	Banco Español de Crédito[10]	Spain	15,405,735	(5.87)	21.78	12,368,609	93
91	94	Landesbank Rheinland-Pfalz-Girozentrale-[11]	Germany	15,342,494	2.83	9.27	13,449,888	82
92	92	National Bank of Canada[13]	Canada	15,312,494	(3.84)	(2.00)	13,762,870	80
93	60	Banco di Sicilia[7]	Italy	15,205,956	(44.81)	(36.44)	12,588,452	91
94	93	Banco Hispano Americano[10]	Spain	14,904,969	(3.51)	24.83	12,520,736	92
95	•	National Commercial Bank of Saudi Arabia[17]	Saudi Arabia	14,887,171	22.31	23.03	13,207,792	87
96	[illegible]	Bank of New South Wales[7]	Australia	14,068,612	(30.12)	(15.90)	11,014,945	97
97	97	National Bank of Greece[7]	Greece	14,435,156	7.90	32.09	11,911,398	94
98	•	Chuo Trust & Banking[9]	Japan	14,288,984	2.36	18.09	13,224,737	86
99	65	Banca Nazionale dell'Agricoltura	Italy	14,066,720	7.67	24.00	11,537,690	95
100	98	Banco de Bilbao[10]	Spain	13,364,354	0.66	30.21	11,061,972	96
		TOTALS		4,029,297,028			3,312,860,453	

N.A. Not available.

•Not on last year's list.

¶Preliminary figures.

[5] Stockholders' equity figures have been converted into U.S. dollars using the market rate prevailing at each bank's fiscal year-end. Equity is the sum of capital stock, surplus, and retained earnings. Figures for all French banks are before appropriation of profits.

[6] Includes head office, branches, and agencies.

[7] Government owned.

[8] Average for the year.

[9] Figures are for fiscal year ended September 30, 1982.

[10] Parent company only.

[11] Excludes some subsidiaries more than 50% owned.

[12] Figures are for fiscal year ended March 31, 1982.

[13] Figures are for fiscal year ended October 31, 1982.

[14] As of February 11, 1982, Cie Financière de Suez reduced its holdings in Crédit Industriel et Commercial. As a result,

LOANS[3] $000	NET INCOME[4] $000	STOCKHOLDERS' EQUITY[5] $000	OFFICES[6]	EMPLOYEES
20,860,716	69,891	711,949	20	1,828
19,463,369	48,201	820,320	1,182	15,445
16,659,489	32,333	359,638	52	5,133
19,057,167	47,297	804,122	239	11,440
18,733,062	52,070	401,053	446	16,891
24,312,880	41,299	479,992	11	2,215
23,016,914	46,532	1,308,902	243	10,770
20,167,981	74,501	1,068,048	381	18,555
20,799,935	45,630	1,525,449	706	15,043
20,511,093	22,656	521,867	7	2,902
15,023,992	48,737	534,048	193	8,960
18,006,544	34,158	328,046	1,222	24,824
20,406,736	9,137	489,361	233	4,600
13,226,667	30,183	327,480	53	4,892
18,985,707	695	753,448	265	8,097
11,958,363	158,224	848,371	1,311	32,357
11,311,176	141,772	435,244	455	15,649
13,007,987	38,195	385,438	190	7,278
14,431,878	33,616	529,960	482	10,948
10,883,086	N.A.	492,730	1,790	28,000
15,307,328	190,942	390,987	372	10,263
13,334,271	33,030	477,609	980	11,507
12,739,046	47,027	559,560	186	7,602
8,063,258	65,137	579,987	848	10,335
11,308,761	10,660	597,285	308	9,169
12,105,332	109,943	1,009,149	1,412	24,393
11,641,417	150,584	871,805	1,816	21,844
13,248,011	7,935	270,328	1,357	2,722
10,159,371	52,842	283,858	380	7,110[9]
8,234,456	5,153	625,931	496	13,524
6,326,858	766,267	N.A.	234	12,546
19,571,868	20,043	295,567	6,293	172,906
8,382,797	29,657	386,888	3,063	18,000
8,075,981	7,746	104.173	47	2,874
8,893,434	34,607	180,711	452	5,040[9]
11,935,481	110,151	5,962,623	1,837	18,361
8,418,434	24,321	168,931	131	3,542[9]
13,326,504	193,797	1,124,910	1	350
12,124,598	25,957	367,074	235	8,452
8,975,318	150,290	705,322	2,167	19,222
11,282,225	14,396	257,470	6	1,994
11,968,630	(7,528)	424,824	610	12,513
8,827,490	7,743	593,646	312	8,546[9]
8,131,242	90,148	642,944	1,367	17,082
5,759,246	168,592	698,690	142	5,687[9]
9,052,175	140,769	919,863	1,376	23,956
7,794,974	38,045	555,111	420	13,750
7,064,521	9,219	102,520	50	3,870
7,626,250	26,799	382,553	211	7,936
10,331,011	80,334	479,092	1,278	16,650
2,626,730,936	12,561,971	116,727,130		2,233,038

these banks are listed separately on this year's list.

[15] Figures are for fiscal year ended June 30, 1982.

[16] Includes certain subsidiaries owned 50% or less, either fully or on a prorated basis.

[17] Figures are for fiscal year ended October 17, 1982.

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The figures in this FORTUNE International 500 Directory were prepared by reporters Ann Goodman and Michael McFadden. The figures on the 100 Largest Commercial Banking Companies Outside the U.S. were prepared by reporter Margaret A. Elliott.

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FORTUNE

Like schoolchildren, artists work with chalk, though they generally call it pastel. Marc Rosenthal, whose work is familiar to readers of Office Hours, drew an American flag to symbolize the national concern about a national institution, the public schools. For a special report on their problems, see page 60.

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TAKEOVERS/ORIN KRAMER

WINNING STRATEGIES FOR INTERSTATE BANKING

■ The long-heralded consolidation of the U.S. banking industry is under way. With Congress still leery of letting banks leap across state boundaries, deregulation is taking place through the back door, in the states themselves. They have decided that since Congress will eventually act, they had better let local banks gather into large and presumably muscular institutions that can stand up to the money-center banks when interstate banking does arrive. So far, however, few banks have come up with coherent and promising strategies for the merger game.

In the 1970s the states loosened restrictions on growth and acquisitions inside state boundaries. Today multibank holding companies are permitted in 40 states, including such major markets as New York, California, Texas, Florida, Pennsylvania, and New Jersey. Now the states are paving the way to interstate competition. Last spring Massachusetts, Connecticut, and Rhode Island enacted legislation authorizing interstate acquisitions among banks in the three states, and Florida legislators are battling over a bill to make Florida the anchor of a similar multistate enclave in the Southeast. Other jurisdictions, ranging from California to Minnesota, have rejected the regional approach. They are thinking about following the lead of New York and Maine in permitting interstate marriages with banks in any state that enacts reciprocal legislation.

With interstate banking in sight, the industry's traditional love of size has become almost an obsession. Harry Keefe, the highly regarded banking specialist at Keefe Bruyette & Woods, asserts that the optimal size for a bank is at least $15 billion of assets (only 23 institutions meet his standard). Although bankers would differ on the precise number, Keefe's general sentiment is widely held. Says consultant John Mingo of Golembe Associates: "The driving rule is what's the biggest merger I can get away with on legal grounds if the economics and vibrations are right."

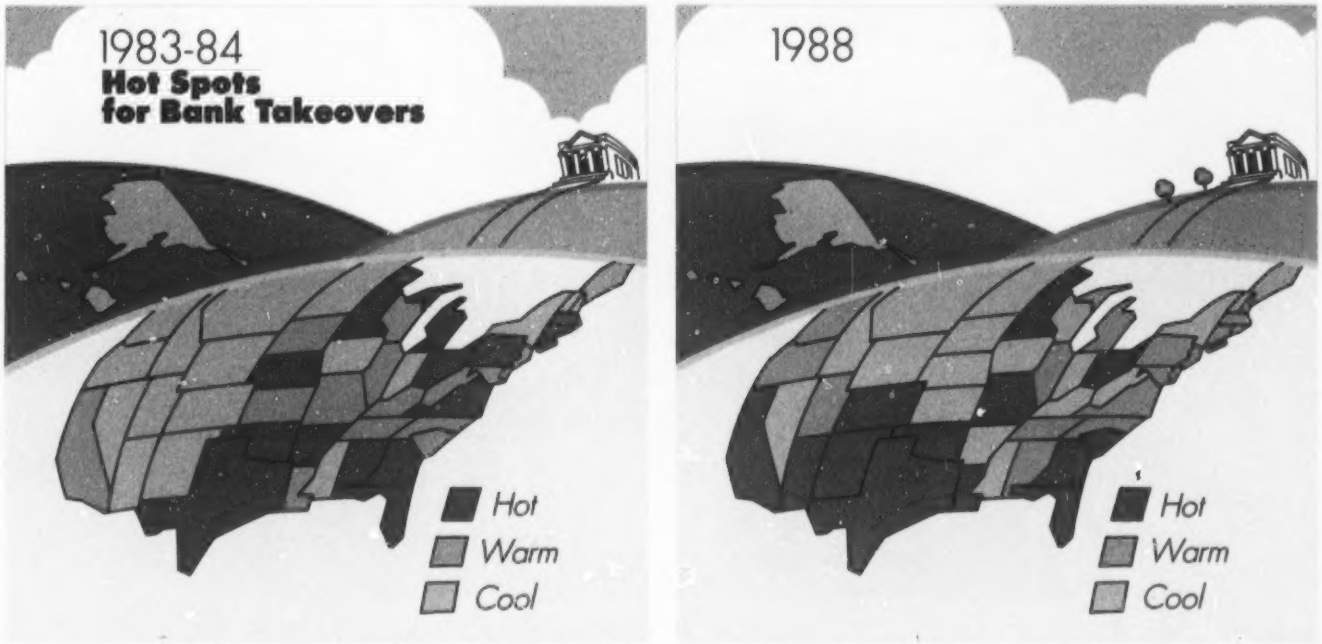
These trends and sentiments have produced an explosion in mergers and acquisitions. According to Earl E. Jackson III of Kidder Peabody & Co., the dollar volume of prices paid in major bank acquisitions jumped from $475 million in 1980 to $1.4 billion in 1981 to $3.6 billion in 1982. So far 1983 is running well ahead of last year's pace. The deals are also bigger than ever before. Two years ago no healthy bank with assets over $1 billion had ever been purchased by another U.S. bank. Today changing industry attitudes and liberalized antitrust standards from the main policeman of big bank mergers, the Federal Reserve, have made such deals common. David Cates of Cates Consulting Analysts notes that nine were announced in 1982 and ten in the first half of 1983.

Pennsylvania introduced statewide banking last year, and its experience serves as a model for what is happening or will happen in other states, in regions such as New England, and ultimately across the nation when full interstate banking is authorized. The game is dominated by the largest players. The mergers coupling Mellon National ($18 billion in assets) with Girard ($5 billion), and Pittsburgh National ($7 billion) with Provident National ($3 billion), reconfigured the state's banking structure and introduced a new force: the mega-regional bank. Faced with these new regional giants, the state's second-tier banks are also consolidating at an unprecedented rate. Eight out of 12 of the state's second-tier banks (institutions with from $750 million to $3 billion in assets) have been involved in major mergers or acquisitions over the past year. And the tiering effect in Pennsylvania—what William Weiant of First Boston Corp. calls "peer mergers" among the largest banks and defensive consolidations among smaller institutions—is evident today in New Jersey, Virginia, Ohio, Texas, and Florida.

YET MUCH OF THAT ACTIVITY is guided by the strategic perspective that drove merger and acquisition thinking in the 1970s, and this strategy is inadequate in the brutally competitive environment of the 1980s. "Simply stated, the conventional strategy has been and is to buy the biggest banks in the biggest, fastest-growing markets you're not in, and then move to smaller local markets on the same basis," says lawyer John D. Hawke Jr. of Arnold & Porter in Washington, D.C. Former Comptroller of the Currency John G. Heimann explains the allure of the old game: "When bankers have fought for something as long as they did for geographic deregulation, there's an almost Pavlovian tendency to capitalize on it as originally planned—even though the world's changed."

To be sure, size and a presence in high-growth markets offer distinct advantages. Historically a franchise in a growing market

ORIN KRAMER *was an adviser overseeing banking policy in the Carter White House and later a member of McKinsey & Co.'s financial institutions group.*



Over the near term, bank merger activity will be most intense in the traditional hotbeds, such as Texas and Florida, and in states like Nebraska, which recently authorized statewide banking. The 1988 map assumes Congress will have okayed interstate banking by then. The big California banks will move toward the Southwest, the Northeasterners into the Sunbelt, and all acquirers will seek to expand near their home markets. Vast stretches of the country outside major metropolitan areas will attract few bidders. The table below doesn't include bailouts of sick banks.

Biggest Bank Mergers 1982-83

PRICE* (millions)	Announcement Date	**ACQUIRER** Headquarters	**ASSETS**** (billions)	**ACQUIREE** Headquarters	**ASSETS**** (billions)
$515	6/21/83	**MERCANTILE TEXAS** Dallas	**$10.2**	**SOUTHWEST BANCSHARES** Houston	**$6.9**
$334	5/9/83	**SUN BANKS OF FLORIDA** Orlando	**$5.0**	**FLAGSHIP BANKS** Miami	**$3.1**
$288	7/26/83	**FIRST CITY BANCORP OF TEXAS** Houston	**$16.6**	**CULLEN/FROST BANKERS** San Antonio	**$3.0**
$282	4/30/82	**INTERFIRST** Dallas	**$17.3**	**FIRST UNITED BANCORP** Fort Worth	**$2.4**
$275	8/9/83	**FIRST CHICAGO** Chicago	**$35.9**	**AMERICAN NATIONAL** Chicago	**$3.2**
$269	7/14/83	**CBT** Hartford	**$5.1**	**BANK OF NEW ENGLAND** Boston	**$5.1**
$244	4/19/82	**PITTSBURGH NATIONAL** Pittsburgh	**$6.9**	**PROVIDENT NATIONAL** Philadelphia	**$3.3**
$220	8/2/82	**MELLON NATIONAL** Pittsburgh	**$18.4**	**GIRARD** Philadelphia	**$4.8**
$203	7/25/83	**FIRST NATIONAL STATE BANCORP** Newark	**$4.9**	**FIDELITY UNION BANCORP** Newark	**$3.4**
$175	2/25/83	**VIRGINIA NATIONAL BANKSHARES** Norfolk	**$3.9**	**FIRST & MERCHANTS** Richmond, Va.	**$2.8**

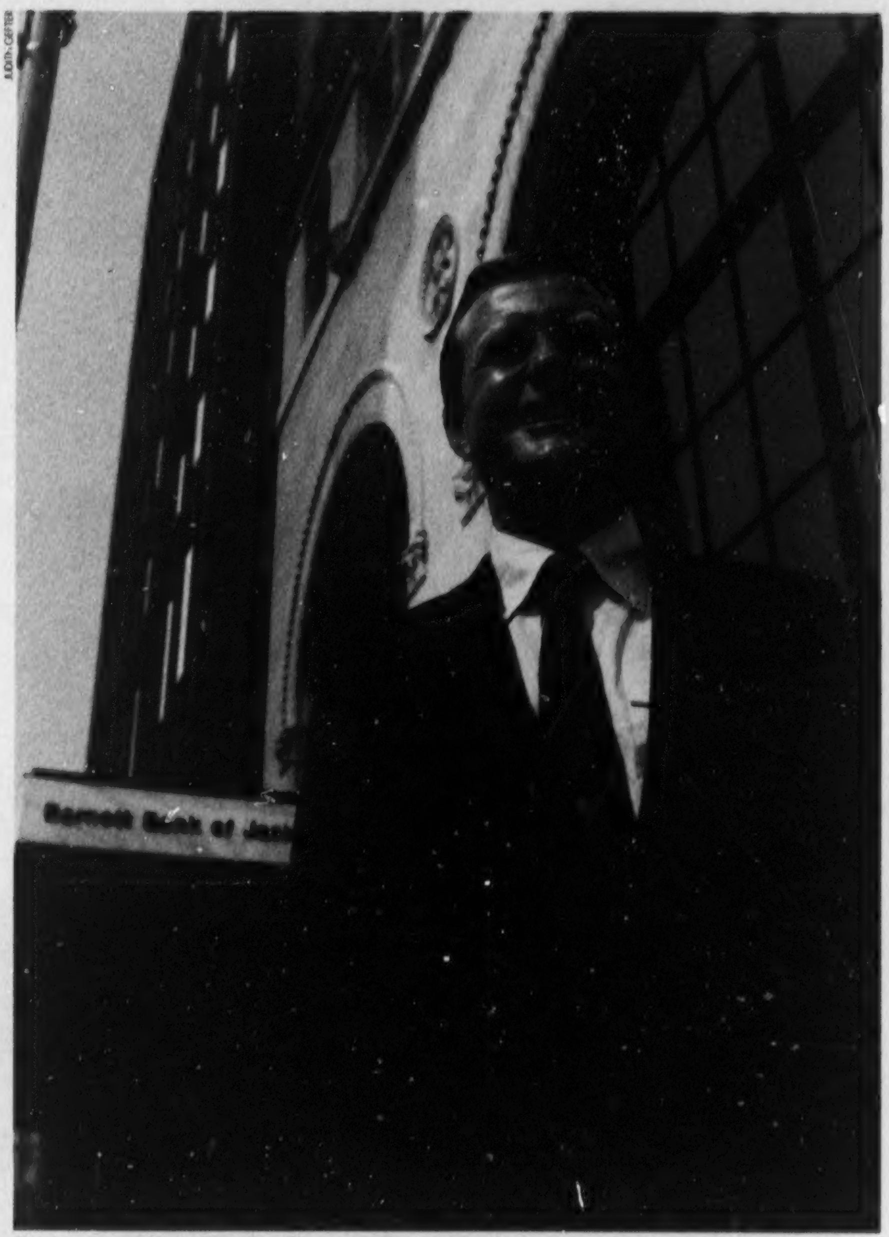
*Cash or stock being received by smaller of the two merger partners **Year-end prior to announcement

Source: Merrill Lynch Capital Markets

was sufficient to produce a high return on equity: among the ten FORTUNE 100 banks with the highest returns on shareholders' equity, five are in Texas, where the local economy floated along on the oil boom. Size brings higher lending limits and permission from the regulatory authorities to maintain less capital as a percentage of assets. Size also means access on more favorable terms to the equity and debt markets. And in an interstate environment, size is seen as a strategic imperative: size to achieve economies of scale, size to compete with money-center banks, size to ward off the unwanted acquirer. Indeed, bankers frequently suggest that many of today's transactions reflect "C.E.O. strategies"—efforts to preserve the autonomy or strengthen the prestige of management, without offering commensurate benefits for the shareholder.

The problem is that these traditional strategies are being implemented just as the economics of commercial banking are undergoing traumatic change. In recent years the preponderance of bank profits came from paying below-market interest rates to savers. To attract those lucrative deposits, banks built expensive branch systems: the number of branches grew from 11,000 in 1960 to 42,000 in 1982, and bank operating costs have been rising at an explosive annual rate of 14%. They currently total $35 billion, or nearly 1% of GNP. Now the cheap deposits that subsidized this expensive growth are disappearing with the elimination of interest rate ceilings. Yet according to Morgan Stanley analyst Arthur P. Soter, "The quantum cost reductions necessary to offset the loss of the rate subsidy are not yet happening."

INDUSTRY PROFITABILITY has already declined about 19% since 1979. Citicorp executives believe that today's average annual profit of $30 per retail customer will drop to $10 over the next few years for all but the most efficient banking organizations—an analysis with which some other leading retail bankers agree. In short,



JUDITH GEFTER

Under President Charles Rice, *48, Barnett Banks became a market leader in 31 of the 37 Florida cities it has entered. Barnett will be a takeover target itself when interstate barriers fall.*

cutting expenses will be a central priority for successful banks in the 1980s, and merging high-cost institutions into one another will not by itself solve the problem. "A lot of bankers think they can kiss a frog and turn it into a princess," says an investment banker.

The reality is that the elimination of monopolies created by interest rate ceilings and geographic barriers requires hard new thinking. The most successful acquirers, banks that have been active buyers yet have maintained a high return on equity, are focusing primarily not on getting bigger but on producing profitability and a high stock price.

That's easier said than done, but can be done. The first requirement for a successful acquisition, the ticket that allows you to play the game, is a higher price-earnings multiple than those of your prospective targets. Studies have shown that market valuations of bank stocks are based primarily on return on equity, not earnings per share. Let's say you are doing well on the return-on-equity front, maybe because you're bright, maybe because you've got a grip on a lucrative market. You may be able to buy a bank in a high-growth area, one that complements your own operation. But you will have to pay a premium, which will probably mean at least some short-term dilution in your earnings per share. Then you will have to "earn back the premium," as bankers say, by improving the performance of the merged institutions. If not, your return on equity and your stock price could fall. You could become the gazelle rather than the tiger in the acquisition forest. Says John G. Medlin Jr., president of Wachovia Corp. in Winston-Salem: "The starting point is to view acquisition activity not as an end in itself but as a means of enhancing return on equity and shareholders' market value."

WHEREAS a franchise in an attractive market has been sufficient to produce a high return on equity, in a deregulated environment the winners will be those who, as William Wyman of Booz Allen & Hamilton puts it, "see banking as a set of separate lines of business, and focus on those businesses in which they either have lower costs or provide greater value than the competition." Wyman's prescription is counterintuitive for most of the industry. Most banks' merger activities are aimed at providing a full product line to all customer groups within a given geographic market, and few things are harder emotionally for most bankers than divesting a line of business—as Bankers Trust has done by selling off 150 branches and abandoning the mass market. But Manufacturers Hanover Chairman John F. McGillicuddy stresses the reality. "Offering 28 flavors of ice cream sounds exciting," he said in a speech early this year. "But it could well be that vanilla, chocolate, and strawberry provide 99.9% of your earnings." The key to success is "leveraging off strength," as Stephen T. McLin, strategic planning chief at Bank of America, puts it, and that concept is pushing banks with focused strategies in diverse directions. The common thread is agreement that getting bigger simply by entering high-growth markets won't suffice.

For many savvy acquirers, merger targets will be banks that can be used to serve the low end of the corporate market—companies with annual sales below $75 million. That focus largely reflects a process of elimination. Buying banks to serve the top of the corporate market makes no sense. This is a highly competitive business from which all but the strongest regional banks are retreating. Moreover, anybody who wants to compete with towering entities like Morgan Guaranty, Deutsche Bank, or Barclays can serve big corporate customers in Houston or Peoria through a small local office. By contrast, the low end of the corporate market offers major advantages. As even the largest

ARTHUR MEYERSON

By buying small banks *serving the low end of the corporate market, President Gerald Smith, 53, built Houston's Allied Bancshares from $250 million in assets ten years ago to $6 billion today.*

institutions concede, regional banks that know how to sort out the sheep from the goats and how to give the sheep a comfortable shave have nothing to fear from invaders. In this market, ten years of lunches count for much more than sophisticated advice about hedging foreign currencies.

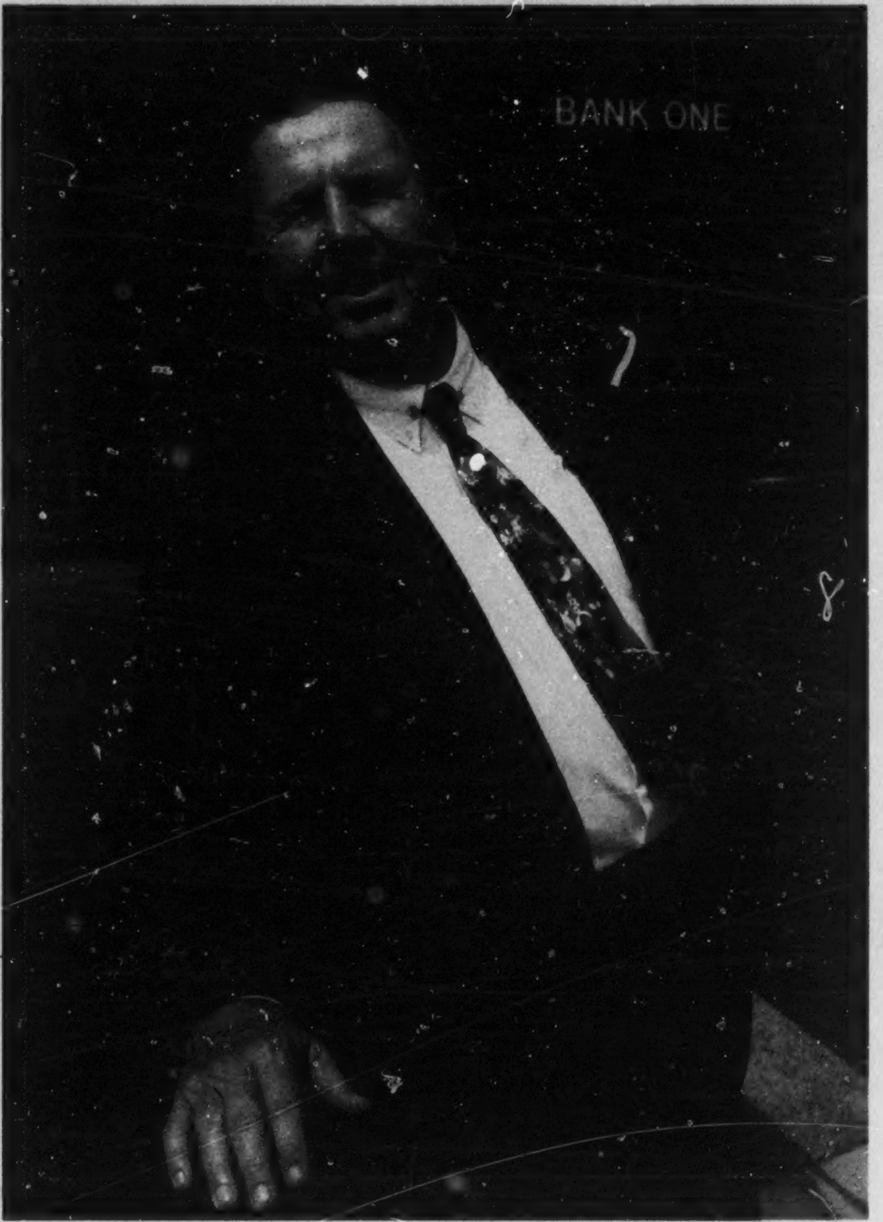
The model for success through serving the lower middle market is Allied Bancshares in Houston, which has grown from a three-bank, $250-million holding company in 1973 to a 48-bank network with assets of $6 billion and a return on equity of 22.3% in 1982, the second highest (after State Street Boston Corp.) among FORTUNE's 100 largest banks. While its major Texas competitors have primarily bought large broad-line banks, Allied has concentrated on buying smaller banks serving what Roger Kline of McKinsey & Co. calls "the forgotten segment"—the so-called commercial or small-business market. Although only one-third the size of its bigger Houston competitors, Allied claims to have the largest market share among Houston area companies with annual sales of $5 million to $20 million.

Other sensible approaches to acquisitions are emerging, the most common of which is capitalizing on scale economies. Economists have long argued that scale economies in banking are limited, but new data suggest they can be significant and that they vary by line of business. The trick is to expand to the natural boundaries of a particular line. Sun Banks of Florida in Orlando, an efficient retailer, has the most automated teller machines (ATMs) of any Florida bank; its acquisition of the $3.1-billion Flagship Banks of Miami, which is fourth in the state in ATM coverage, will permit significant savings through consolidating data processing and other back-office operations. Bank of Boston manages over $6.7 billion in trust assets, making it one of the biggest players in the game. Its purchase of Casco-Northern in Maine will allow scale economies in managing Casco's substantial trust operations.

For today's most sophisticated acquirers, size is a component but not the critical element in their thinking. Twenty years ago Barnett Banks of Florida was a modest $250-million Jacksonville organization. In the interim it has made over 40 acquisitions, more than any other Florida bank holding company. When New York bankers are asked privately which Florida bank they would purchase given their druthers, Barnett tends to be the choice. To all appearances, Barnett is the classic aggressive acquirer, yet there are attractive Florida markets, such as Panama City, which it has declined to enter. Barnett is expanding within markets where it can be a major player. Of the 37 markets the bank is in, it is one of the top three players in 31. Sun Banks, third to Barnett among large Florida banks in return on equity, has a similar approach. Asked to identify the biggest shift in his thinking in recent years, Sun Chairman Joel Wells, who has had two decades of experience buying Florida banks, responds: "Showing the flag in every county is out."

HOW TO HANDLE the $1.8-trillion consumer market is the most dangerous issue facing merger-hungry banks. Consumer banking is still the heart of the business at most banks that will be up for sale. And despite the cost squeeze now beginning, consumer banking still produces most of the earnings for which an acquirer will pay. Consumer banking is not inherently unprofitable. Leading institutions around the world, operating under price deregulation and competitive conditions frequently comparable to those in the U.S., show returns on equity of 20% or more—a figure that Citicorp, for example, has achieved in New York City and in the 18 foreign countries where it has consumer operations. On the other hand, retail banking is the sector most vulnerable now to a decline in

CARL SKALAK



Vice Chairman John G. McCoy, *70, equipped Banc One in Columbus, Ohio, with superb data-processing capability and turned it into a top performer, proving you can prosper in the heartland.*

earnings: it costs the average bank $150 to $200 per year to serve the average individual customer, and analysts believe bankers must cut that figure by at least one-third just to cover the higher costs of deposits.

The key to cutting costs, and the central challenge in retail banking, as McLin at Bank of America puts it, is "to migrate customers from the brick and mortar system to electronic delivery systems." Citicorp calculates that the average cost of a teller transaction is $1.27, compared with 55 cents for a machine transaction. If you double the customer volume of a brick and mortar branch, you'll need about twice as much staff; with ATMs, increased volume generates a far more modest rise in costs. And electronic systems are less sensitive to inflation.

The overwhelming majority of acquirers remain committed to retail banking, and among them three schools of thought are emerging. The first school, which includes most banks, has thought about the matter, but not deeply. It tends to regard talk of a retail profit squeeze as overblown and remains willing to pay big premiums for consumer-oriented banks. This school understands the need to go after the most profitable segments of the market, such as the affluent consumer, to reprice loans and services according to their true cost, and to close or sell off unprofitable branches. Yet this class of acquirers remains basically committed to serving the mass market through what consultant David Cates calls "a just plain uneconomic" brick and mortar system.

IN THE SECOND GROUP are banks that will go after the mass market with a full recognition of the need to convert to ATMs and highly automated back offices. Richard Rosenberg, a vice chairman of Wells Fargo, poses the issue well: "Am I buying a strong enough customer base to offset the prospective obsolescence of the delivery system?" Some 40% of routine transactions at Wells Fargo are done by machine today, and that figure is projected to reach 75% over the next few years. Likewise, Sun Banks and its acquirees are blanketing Florida with ATMs while reducing brick and mortar branches. Says Wells: "Our pruning is based on the old agricultural philosophy—to make your tree grow you have to cut back." Indeed, the business of divesting brick and mortar has become so active that a middle-size New Jersey investment banking firm, Ryan Beck & Co., which was once unknown outside its region, has created a lucrative nationwide niche for itself by advising on and carrying out the unloading of unwanted branch offices.

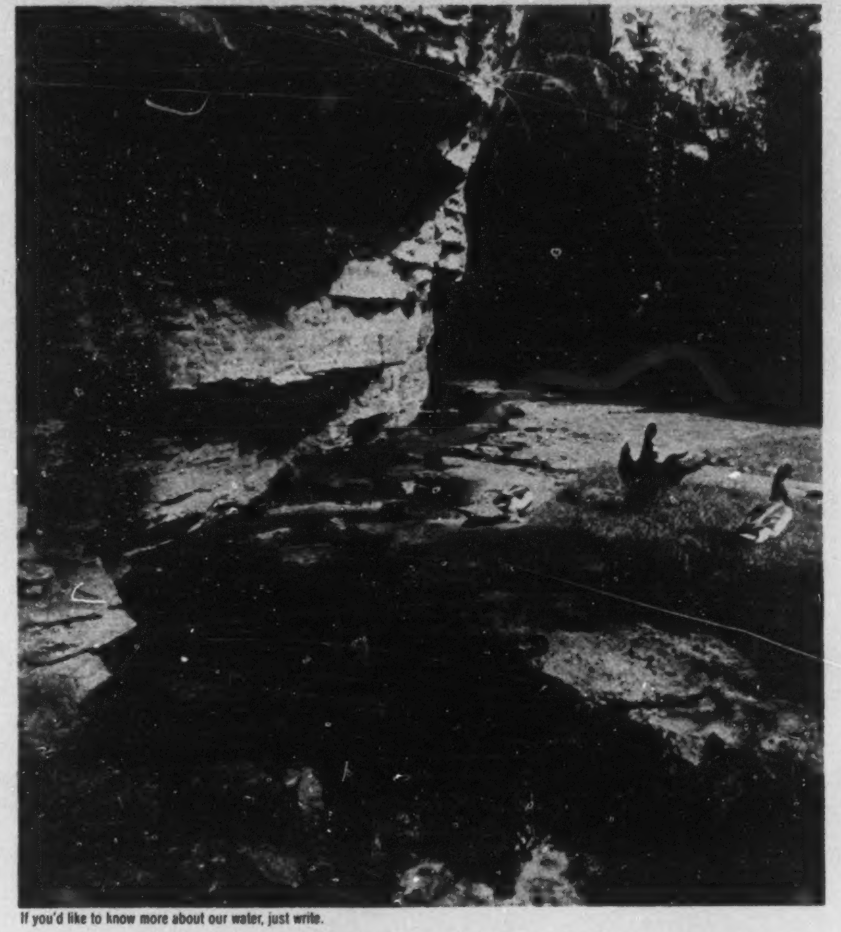
A third approach is the one adopted by Citicorp. Last year it bought Fidelity Savings of San Francisco, now Citicorp Savings, and reportedly was bidding for ailing Biscayne Federal Savings & Loan in Miami this summer. The general interpretation of these moves has been that aggressive Citi, prohibited by law from buying banks in those markets, was going after the closest thing to a bank available, and that if free to do so it would be first in line to buy big banks to penetrate the retail market. In reality, thrifts have lower operating costs than commercial banks because they generate more deposits per branch and provide fewer services. Citi regards them as superior vehicles for penetrating the mass market.

If sophisticated players like Citi are correct, the premiums often being paid to acquire retail banks don't make much sense. Most acquisition prices still reflect historic earnings or, worse still, the acquiree's book value, which is distorted by bank accounting practices and is a notoriously crude measure of net worth. "Historic earnings and book value give some measure of a bank's past record, but acquisition prices should be tied to what you can earn in the prospective environment," says Medlin of Wachovia. Consequently, some potential acquirers plan to sit out this merger wave. "Prices will decline over time," observes a senior executive at a large New York bank, "so I wouldn't expect us to be a buyer in round one."

FOR OTHER REASONS as well, the much feared money-center banks will be secondary players in the acquisition game over the next few years. They are still barred from the most active markets, and they don't sport the high P/E ratios of today's leading acquirers. But the big banks are not entirely dormant: some have executed "when and if" agreements (for example, Chemical has agreed to take control of Florida National when the law permits), and many have prepared extensive contingency plans for interstate banking. Strategies vary, but the biggest banks generally look toward acquiring four or five large Sunbelt institutions, with particular emphasis on banks with heavy loan demand and a strong position in the corporate middle market.

Yet arguably the most distinctive feature of successful acquirers may be not their strategies but their skills in managing the acquisition process, which has two components. First, the acquirer needs special expertise and must devote substantial resources to the identification and negotiation of potential transactions. Chairman John F. Havens of Banc One in Columbus, Ohio, is a dealmaker by training, and he devotes 85% of his time to merger activity. Marc Shapiro, Texas Commerce's 36-year-old vice chairman, has overseen the bank's purchases and is considered one of the leading bank acquisition analysts in the country.

"The real test, though," says Chairman John P. LaWare of Boston's Shawmut Corp., "is achieving the economies that made the deal attractive in the first place." Managing acquisitions requires a delicate balance between allowing local units sufficient operating flexibility and centralizing overarching management decisions, but few banks give the issue adequate attention. Before getting into the Florida market through a legal loophole that let it use a long-standing trust operation to buy full-fledged banks, NCNB Corp. of Charlotte, North Carolina, spent months studying how to operate an interstate network. The study paid off—NCNB has been quite successful in Florida—but NCNB is the exception. The usual approach has been simply to vest the new subsidiary with broad operating autonomy, with the degree of independence rising as the size of the acquiree and distance between the two institutions increase. The result is that synergies have been largely imaginary; the performance of the acquired bank hasn't improved after the



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THE TREND toward mergers between peers has at least punctured the old myth that the big guys would gobble up the little guys in North Nook and Buzzard Pass. Thousands of such banks will survive, though most will see profits shrink as they have to pay higher rates to the townsfolk. Those that can roll over the higher-cost deposits into sound loans to local businesses will do quite well. They know their customers and provide personalized service that an intruder from the big city would be hard put to match.

With the merger wave centering on big banks, a fascinating counterpoint is the increasing receptivity among small banks to the thought that they might one day want to sell out. The value of their monopoly franchise plunged as soon as they had to start paying depositors more. "What is the best time to sell a small bank?" one analyst asks. "Last year."

The other urge to sell comes from what Bradford M. Johnson of Lehman Brothers Kuhn Loeb has characterized as the "demographics time bomb." Johnson notes that of the nation's 15,000 banks, some 11,500 have no public market for their stock. Shareholders, especially those with significant minority blocks, have a hard time selling out on a timely basis for fair market value.

Nearly two-thirds of the shareholders in institutions with assets under $500 million are over 50 years old, Johnson's studies show, and one-third are over 60. Contrary to myth, only 16% of shareholders in small banks are millionaires. The desire of small-bank shareholders to liquefy their holdings and the decreased interest among larger bank holding companies in purchasing smaller banks is likely to deflate the already declining premiums being paid for these institutions. Stephen Friedman, a former SEC commissioner and now an attorney with Debevoise & Plimpton, thinks some small bankers outwitted themselves: "They held out against geographic deregulation until their franchise had lost a lot of its value."

■ Before the freeing of consumer interest rates last fall, local banks were America's most entrenched monopoly, seemingly impregnable. Change still comes slowly in this world. Consumers don't shift deposits overnight. But the foundations of the monopoly have been swept away, and small banks are rethinking their stand against interstate banking. Within perhaps three to five years, enough will have switched position for interstate banking to carry the day in Congress.

Leading Takeover Candidates

COMPANY Headquarters	**ASSETS 12/31/82** (billions)	**MARKET VALUE 8/15/83** (millions)
FIRST PENNSYLVANIA Philadelphia	$5.4	$119
FIRST FLORIDA BANKS Tampa	$2.5	$272
RIHT Providence	$1.9	$93
NATIONAL BANCSHARES OF TEXAS San Antonio	$1.9	$198
TOLEDO TRUSTCORP Toledo	$1.7	$189
BANCTEXAS GROUP Dallas	$1.6	$179
COLONIAL BANCORP Waterbury, Conn.	$1.3	$63
FIRST NATIONAL BANCORP OF ALLENTOWN Allentown, Pa.	$1.1	$60
CONIFER/ESSEX GROUP Worcester, Mass.	$1.0	$61
MERRILL BANKSHARES Bangor, Maine	$0.6	$59

According to a FORTUNE survey *of over 60 bankers, these ten are among the banks likeliest to be gobbled up soon. Factors to look for include the growth rate of the target's market area, market share, financial condition (injured players such as First Pennsylvania are vulnerable), and management's receptivity to a bid. The list does not include banks that may be principals in "peer mergers," which don't carry big takeover premiums and so preclude a killing for speculators.*

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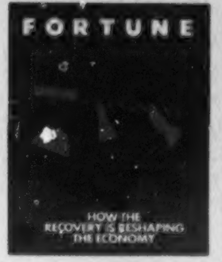

Roger Huyssen's cover painting depicts some of the industries that fit together to make up the U.S. economy. An account of how the recovery is changing this topography begins on page 60.

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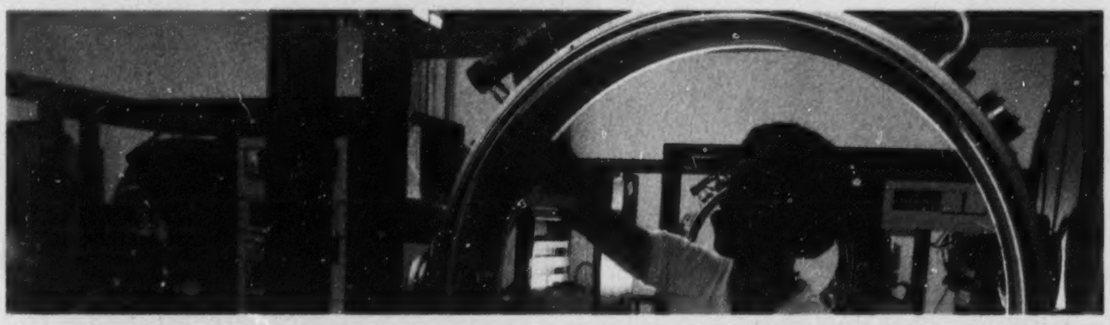

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POLICY/STEVEN FLAX

THE CRACKDOWN ON COLLUDING ROADBUILDERS

■ Like a giant bulldozer, the Antitrust Division of the U.S. Department of Justice is plowing through the roadbuilding industry, turning up evidence of bid rigging with every scoopful. It's the largest single investigation in the division's history, and the first time the targets of such a major effort have been small businesses instead of giants like IBM or AT&T. Hundreds of contractors have been convicted, many receiving prison terms. Scores more will be indicted. Bid rigging apparently has cost taxpayers at least several hundred million dollars a year.

No antitrust campaign has affected the lives of so many businessmen. Launched in the early Seventies, the federal juggernaut has picked up momentum. Since the end of 1979, federal prosecutors in 20 states have obtained 400 criminal convictions resulting in fines of approximately $50 million and 141 jail sentences amounting to more than 46 years of actual incarceration so far.

NOW THE PROBE is expanding, boosted by contractors who are cooperating with investigators in hopes of receiving lighter sentences. Fourteen new investigations have opened in the last year. The division is presenting evidence of conspiracies to grand juries in 20 states, and federal investigators are going into New York, New Jersey, New Mexico, North Dakota, Ohio, and Rhode Island, among others. "Every time we turn around, somebody is rigging a bid with somebody else," says John J. Hughes, chief of the Antitrust Division's Middle Atlantic office. "We'll be bringing a massive number of cases in the next few years."

They are also looking beyond paving contracting. The investigation has widened to include bid rigging in such activities as electrical contracting, water and sewer projects, bridges and tunnels, and sales to states and the federal government of asphalt and other bituminous emulsions, plumbing supplies,

RESEARCH ASSOCIATE *Wilton Woods*

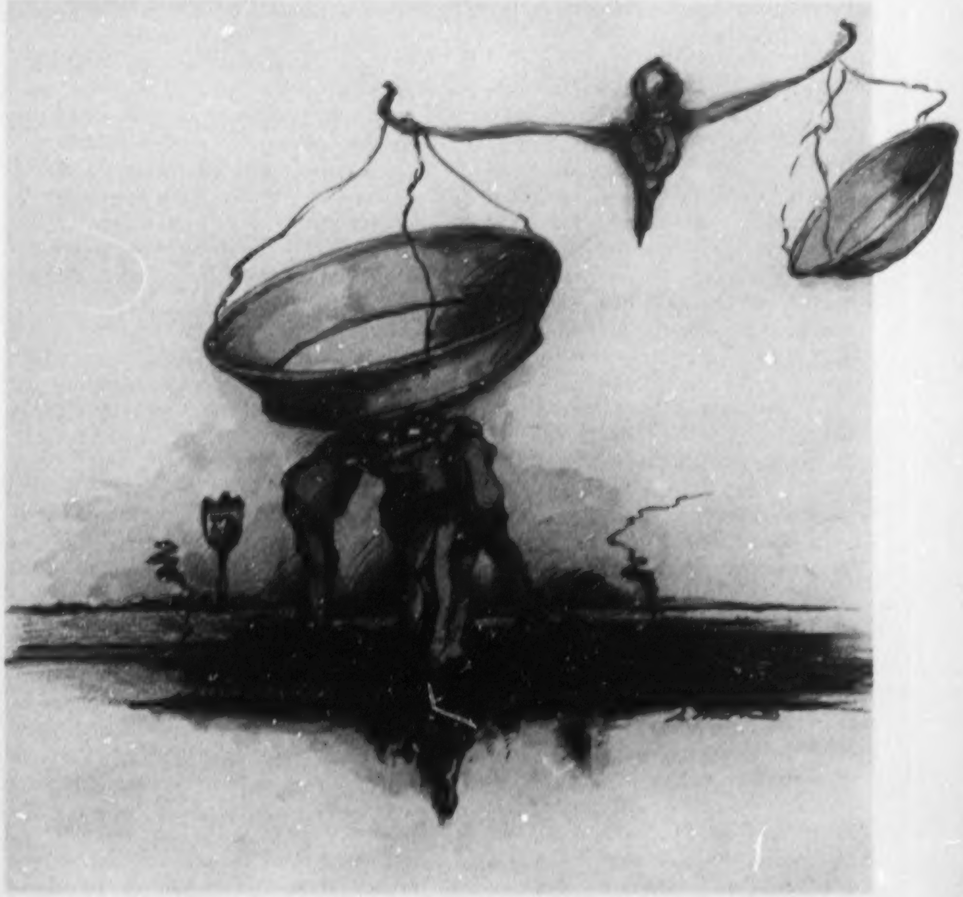

ILLUSTRATION BY GEOFFREY MOSS

and equipment for highway signals. Some investigators are looking into deals to purchase school buses and ambulances.

Though nobody can pinpoint the total cost to taxpayers, construction costs in individual states dropped dramatically when the feds moved in. Before a grand jury began investigating bid rigging in Georgia in 1980, construction costs of road projects were running 10% over the estimates of the state's engineering department. By the first half of 1981, when bid-rigging investigations were in full swing, roadbuilding costs had dropped 10% below engineering estimates. "We saw an immediate drop of bids after the investigations started," says Ron Edmondson, an engineer with the Georgia Department of Transportation. In North Carolina construction cost indexes peaked in 1980, right around the time bid rigging was exposed in the state. Though the indexes are rising again, they are still lower than they were three years ago. At the federal level Joseph Welsch, inspector general of the Department of Transportation, says a recent DOT analysis of the $10.5 billion spent annually on the Federal Highway Program shows that for a variety of reasons the government paid between 5% and 10% more than it should have. At least half of that overcharging, he thinks, can be attributed to bid rigging.

FEDERAL INVESTIGATORS believe bid rigging has been going on in some areas for 30 or 40 years. "We've convicted individuals who told us their grandfathers were in it," says Joseph H. Widmar, director of operations at the Antitrust Division. "It has been a way of life." Adds Gregory Simmons, a special agent of the Department of Transportation, "I have no doubt that it is going on everywhere."

Considering the pervasiveness of the collusion and the dimensions of the overcharges, the wonder is that state officials could have overlooked it. But federal investigators seem satisfied that most didn't know what was going on. "This is the opposite of a 'smoking gun' sort of crime," says Welsch. "It was so embedded in the system, such common practice, that it was invisible."

The bureaucratic mentality seems partly to blame. Most state laws governing the letting of contracts are designed to prevent malfeasance by state officials, not bidders. If highway departments got the required number of bids for every job and the bids weren't too much over the state engineer's estimate, well then, that was honest bidding.

Federal investigators also point out that a well-run conspiracy is the hardest crime to detect. Moreover, most state or county highway officials had been dealing with the bid riggers for a long time and regarded them as respected community members who had never been involved in anything illegal. Some conspirators were heads of charities or of their local contractors' associations. One convicted contractor had been head of the law enforcement committee of his contractors' association. "It's like you hear that the minister is dipping into the collection plate after service," says Walter McFarlane, deputy attorney general of Virginia. "At first you can't believe it."

"It's like you hear that the minister is dipping into the collection plate after service. At first you can't believe it."

Still, some state officials ignored obvious evidence. For example, certain states require bidders to file sworn noncollusion affidavits along with their bids. In some cases contractors designated to lose would just sign the bottom of the affidavits and turn them over to the winning bidder to fill out and hand in. Anyone taking the trouble to look would have easily noticed that all the affidavits were written with the same handwriting and same pen, both of which differed from the signatures.

According to federal investigators, here's how the bid rigging worked in cases prosecuted so far. They are convinced that the general pattern persists in many parts of the country. Most state highway departments or county authorities take bids for new projects at regularly scheduled meetings called lettings. In the conspiracy cases, dishonest contractors got together the night before and split the jobs among themselves, at prices that they—not the state—found attractive.

As befits a white-collar crime, the bid rigging didn't ordinarily involve meetings in back alleys or at rest stops on the interstate. Most scheming occurred at pleasant hotels. Often local contractors' associations threw lavish cocktail parties at the hotels the night before lettings, and, federal investigators report, some highway departments would bring over the locked bid box and set it up right on the bar. One group of electrical contractors did their bid rigging at the august Duquesne Club, the exclusive bastion of the Pittsburgh establishment.

In most cases one contractor convinced the others that he needed a certain job. The losers would then post higher or "complementary" bids in return for payoffs, subcontracting work, or reciprocation on bids on other jobs. The winner would decide how much profit he wanted, make his bid, and tell the others the number to be above.

The process often got pretty mechanical. Sometimes contractors divided their region into exclusive territories and *never* competed. They met only to learn the complementary bids they had to make on each other's projects to make the bids on all the jobs look competitive. The only snag occurred when an occasional contractor tried to submit a legitimate bid. He was usually cowed into cooperating by threats. For example, one honest contractor reported to a federal prosecutor that he was told by several conspirators, "If you don't go along we can always move an asphalt plant into your town and take turns bidding below cost against you. Pretty soon we won't have you to worry about." Understandably, most small businessmen would rather forgo bidding on one paving job than face extinction.

BID RIGGING IN THE U.S. is hardly new; one dispute between two colluding roadbuilders landed in court in 1811. But hardly anybody had looked at bid rigging as more than an occasional problem. The current probe didn't start as part of any grand design. In 1971 an investigative reporter for the *St. Louis Post-Dispatch* named Robert Collins uncovered evidence of bid rigging in almost $50 million of construction work on the Adlai E. Stevenson Expressway from Chicago to Springfield, Illinois.

After the *Post-Dispatch*'s series of articles, Collins and a contractor who had been the reporter's source turned over the evidence to Richard J. Braun, then an attorney in the Antitrust Division's Midwest office. (Braun has since gone into private law practice and is now preparing to defend contractors accused of bid rigging.) Braun successfully prosecuted the cases and began following leads into other states. Says John Hughes, one of the three or four investigators then working with Braun, "It was like a kitten pulling a ball of yarn. It unraveled and we've just followed it from one state to the next." In Tennessee, Braun and his team prosecuted 44 cases and nailed, among others, the brother and uncle of former Governor Ray Blanton.

Federal prosecutors have pushed for big fines and maximum jail sentences. They real-

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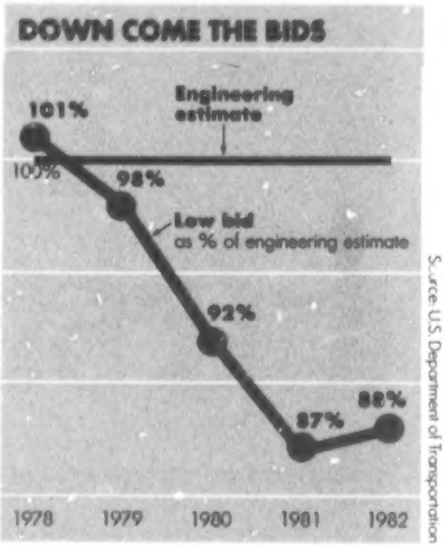
ize that bid rigging flourished for so long not only because the chance of getting caught was remote but because the penalties were minimal: a bid rigger could expect a penny ante fine plus a suspended sentence, at most. Lately fines have ranged all the way up to the total of $7.5 million levied against Ashland-Warren Inc. of Atlanta, a road-paving subsidiary of Ashland Oil Inc. It was the largest antitrust penalty ever assessed. Contractors are also barred from bidding on state contracts for a period of time. Furthermore, guilty pleas or convictions in federal cases leave both individuals and corporations open to civil suits in which state authorities can recover treble damages, enough to bankrupt some contractors.

Still, says one federal investigator, "for some companies, the fines are just a cost of doing business." Prior to the bid-rigging cases less than 10% of those convicted of violating the Sherman Antitrust Act served terms in federal prisons. About 75% of the bid riggers have gone to prison. "Businessmen think that, if they are caught, all they have to do is say, 'I'm sorry,'" says Carl Mullis, an attorney in the Antitrust Division's Atlanta office. "That's not enough for us. We are going to press for more and longer prison sentences." Though several contractors are serving the maximum three-year sentence, the average time bid riggers have spent behind bars is about five months.

The human costs go well beyond the time in prison. Men who were prominent businessmen and respected parents have had to face their communities and their children. One man, a deacon in his church, had to endure explaining his fraud to his congregation. Another, a man who had married the boss's daughter, tried to excuse himself by saying that he had learned bid rigging from his father-in-law. His children turned against him, refusing to believe that their grandfather could have engaged in such activity.

SOME CONVICTED contractors say that, besides greed and security, their motive for going along with conspiracies was acceptance. They were self-made men, and being asked to join the conspiracy by executives of bigger, well-known companies meant to them that they had become powers in their industry. In some cases the ignominy has followed them to the grave. When one of the Stevenson Expressway conspirators died recently, his obituary in the *Chicago Tribune* was headlined "George Krug; Convicted of Bid Rigging in '77."

As part of the penalty for a bid-rigging conviction, companies are often prevented from bidding on public jobs for two years or more. Some have grown too big to stay in business paving driveways and parking lots, and have had to sell off their assets to competitors. Some executives have in effect been prevented from ever working again in their industry. Even if the companies can survive, they find the competitive environment far more cutthroat than before when they resume bidding for public jobs.



As prosecution of bid rigging has gained momentum across the nation, average costs of federal highway projects have fallen. The 101% figure for 1978 is more out of line than it seems because engineering estimates had been inflated by past bid rigging.

Also, companies that relied on bid rigging tended to lose their competitive edge. Inefficient companies remained in business because more efficient ones were obliged to complement their inflated bids. Sometimes the whole competitive process got stood on its head. In one instance a corporate chief executive sent his assistant to participate in bid rigging on two construction projects. By some miscalculation the assistant won both jobs. When he got back to his office, he was demoted—for doing what would have won him congratulations in a normal situation. The ultimate in anticompetitiveness may have been accomplished by a contractor from North Carolina who let his business dwindle to almost nothing because he was able to subsist entirely on payoffs he demanded to not bid on projects.

State officials have now started to scrutinize bids more intensively. They have also tightened bidding procedures and stopped issuing the lists of contractors interested in projects that enabled conspirators to contact one another. Some states are routinely running computer analyses to detect suspicious patterns, and some have stopped handing out their engineers' estimates. Another sign of the times: During the summer of 1982, when Walter McFarlane, the Virginia deputy attorney general who was active in fighting bid rigging in his state, ran a seminar for other state officials on detecting highway bid rigging, the crowd was so great that the seminar was forced to change hotels three times to get a big enough room.

The federal government is taking further measures to combat bid rigging. Besides beefing up the number of law enforcement agents, it has established a confidential hotline for bid-rigging allegations. It has also required that a statement of the penalties for bid rigging be handed out to contractors bidding on government jobs. The Department of Transportation is barring convicted contractors from bidding not only on road jobs, but also on such things as mass transit projects. Some top government officials would like to bar convicted contractors from working on any future federal projects, an idea investigators enthusiastically endorse. "Debarment: that's what they fear the most," says DOT's Gregory Simmons. "A $1-million fine is pocket change to some of these corporations. But their livelihood is made with federal and state contracts."

AS THE EFFECTS of the prosecution have become more evident, some industry spokesmen have claimed that the jail sentences and debarments are destroying the nation's roadbuilding industry and actually decreasing competition. But federal officials dispute the industry allegations. Though easy entry into the business makes counting contractors difficult, only a small fraction of the nation's roadbuilders have been convicted. According to Don Ivers, chief counsel of the Federal Highway Administration, whenever several contractors have been convicted in an area, "we have found that the level of competitors seems to fill right back up pretty quickly."

If anything, competition has increased. In 1978 there were, on average, 3.4 bidders for every federally aided highway construction job. Now the figure is 5.3. "We've seen many more contractors coming into the marketplace," says the Department of Transportation's Joseph Welsch, "because it's a free market again and a lot more contractors feel they might have a shot at it now."

■ The lesson for businessmen in the highway bid crackdown is that, one way or another, avoiding the competitive hurly-burly eventually hurts. Jail is only one possibility. Long-term insulation from the fray can lead to terminal management flabbiness. ■

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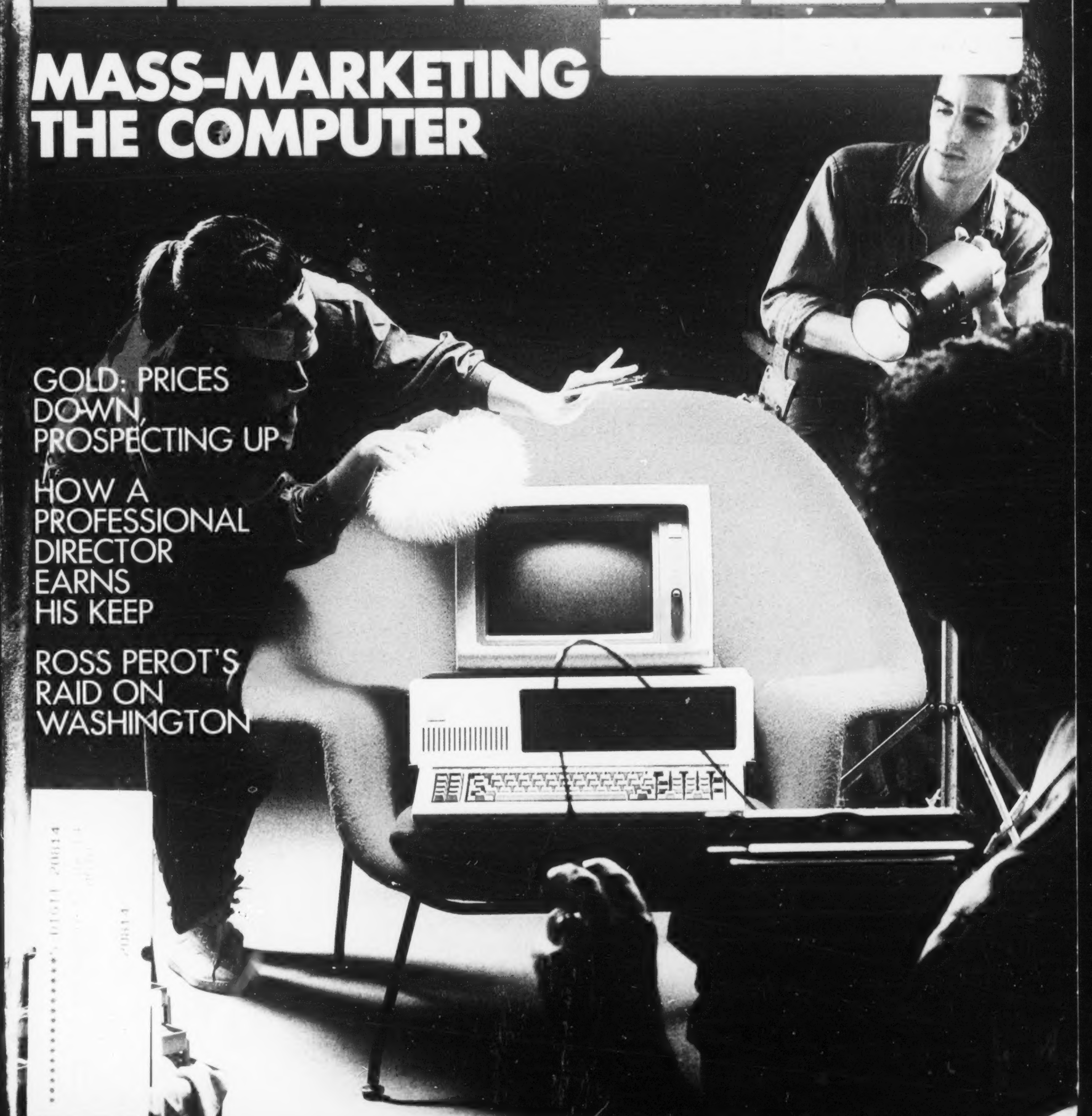

MASS-MARKETING THE COMPUTER

GOLD: PRICES DOWN, PROSPECTING UP

HOW A PROFESSIONAL DIRECTOR EARNS HIS KEEP

ROSS PEROT'S RAID ON WASHINGTON

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MASS-MARKETING THE COMPUTER

Thanks to skyrocketing ad budgets, the personal computer is the newest media star, as Neil Selkirk's cover photograph suggests. But many consumers still find it mystifying. The marketing challenge is examined on page 60.

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FOR SALE: PIECES OF

BRITAIN/ANDREW C. BROWN

■ To her supporters, Margaret Thatcher is bent on "rolling back the frontiers of the state." Opponents say she's "selling off the family silver to pay the butler's wages." In either case, the Prime Minister is taking a turn at unmixing the mixed economy by selling off state-owned businesses. Her plans for future sales are so extensive that she'll almost certainly be looking for overseas investors to get in on the action.

To the entrepreneurially inclined, the nationalized industries seem a rich lode of assets and business possibilities. Under government ownership, however, they're collectively a drag on the British economy. They account for more than 10% of Britain's gross domestic product, but their average return on capital over the past decade was approximately zero. Since World War II they've swallowed up capital write-offs and grants equivalent to some $60 billion at current prices. The damage to Britain's competitiveness goes far beyond those direct losses. Take the coal connection, for example. The National Coal Board tolerates overmanning and operating inefficiencies that make it a high-cost producer by world standards. The Coal Board's major customer is the state electricity industry, which patriotically eschews all but a token amount of cheap imported coal and burns mostly the expensive domestic stuff. It then chills the rest of the economy with overpriced power.

THROUGHOUT the 1970s, Conservative and Labor governments alike agonized over how to get the nationalized industries to operate with some sort of efficiency. Those deliberations culminated in a set of guidelines produced by the Labor government's Treasury in 1978 and still in force. They provide for the setting of targets for capital needs, return on investment, productivity—and even pricing for operations not directly subject to competition. In selling off state industries, the Thatcherites substitute market forces for those bureaucratically administered targets.

Tories call this "privatization." Laborites call it "piratization." According to the polling organization Market & Opinion Research International, British public opinion shifted against nationalization in the mid-1970s and remains strongly negative. But that hasn't shaken the Laborites' ideological commitment to central control of the economy or lessened their deep mistrust of market forces. In the recent election the Labor party called for extending state control to such virgin territory as the electronics and pharmaceuticals industries. The new third force in British politics, the alliance of the Social Democratic and Liberal parties, has staked out the middle ground. The alliance favors letting nationalized industries operate as if they were private sector companies, but doesn't attach much importance to the question of who should own them.

The promised long-term payoff from privatization is a more competitive economy, less subject to the numbing influence of the state, less inclined to misallocate resources. Privatization can also bring an immediate payoff: a one-shot dose of funds when the government sells off a state enterprise. Some of Thatcher's critics insist that privatization is a cynical revenue-raising exercise; the government is forever explaining that the point is not simply to haul in money. But while Thatcherites don't explicitly link the two, the need for cash does abet the ideological urge to shrink the state.

The Thatcherites have not just talked about privatizing—they have actually done some. Over a two-year span beginning in early 1981, they moved five sizable companies into the private sector by selling shares to

High-cost coal *from government-owned mines makes for high-cost electricity from government-owned power plants like this one near Nottingham. That drags on the economy.*

PHOTOGRAPHS BY GRAHAM FINLAYSON

the public. The five, in order of liberation:

- British Aerospace, manufacturer of aircraft, missiles, and space systems.
- Cable & Wireless, operator of telecommunications services in numerous segments of the old British Empire.
- Amersham International, producer of radioactive materials for research and for medical or industrial use.
- Britoil, producer of oil and gas, mostly in the North Sea.
- Associated British Ports, owner and operator of port facilities.

The government got out of Amersham completely, selling 100% of the shares. With the others, the government still owns 45% to 49%. Sales of stock in the five companies brought the Treasury about $1.5 billion. In addition, National Freight Co., a trucking and warehousing outfit, was sold to its management and employees in early 1982 in a leveraged buyout.

All six outfits were profitable at the time they were privatized—that's why they were salable. It's too early to tell how well they will perform after liberation, but the early signs are generally positive. Most have reported gains in profits. The notable exception is British Aerospace, hurt by writedowns associated with its non-military business, which includes the troubled Airbus.

Shares of the privatized companies have performed well, all in all, and some investors who got in early had reason to be glad. British Aerospace, Cable & Wireless, Amersham, and Associated British Ports went public in conventional fixed-price offerings. In each case the shares zoomed in the aftermarket, bringing investors splendid capital gains and bringing the government opprobrium for selling its assets too cheaply.

For Britoil the government structured the offering to capture any windfall gains for itself: the deal was a public tender offer in which investors could submit bids at or above a minimum price. As events proved, the government pitched the minimum too high; investors subscribed for only a third of the offering. The underwriters had to take up the rest, and the shares went into a free fall in market trading. "We're prone to criticism of our share offerings," says a government official. "Luckily, we've been wrong in both directions." Britoil's shares have recovered from their initial slide and are now above the original offering price. So are the other issues—helped, to be sure, by the buoyant U.K. equity market.

That shares of the privatized companies are faring well suggests that investors are betting against a replay of Britain's only major experience with privatization before the Thatcher years. In 1951 the Conservatives privatized the steel industry, and in 1967, after years of threatening to do so, the Labor government renationalized. The Laborites now threaten to renationalize—"without gain" to investors—whatever the Thatcher government denationalizes. But according to security analysts in the City of London, the market considers Labor's chances of forming a future government so remote that the discount the companies carry because of the threat is close to zero.

Besides privatizing those six companies, the government has unloaded bits and pieces of some others. British Railways, for example, has sold 21 of its 25 hotels and has spun off its Hovercraft operation into a joint venture with a private company. Still, Thatcherites have made only a dent in the state's portfolio. They haven't managed to extricate the state from coal, steel, autos, and a variety of other commercial activities that free-market logic dictates it shouldn't be in. "We got out of the easiest things first," admits a Treasury man. "We didn't get into the heartland of the public sector."

The route to the heartland bogs down even in Thatcher's own Cabinet. It is up to Cabinet ministers to promote privatization plans for the industries in their departments, and as one veteran of ministerial deliberations says, "It takes an unusual combination of imagination and will. Often, those ministers with imagination are airy-fairy, and those with will are narrow, blunt, and ineffective." No minister, moreover, wants to get blamed for creating unemployment. As that Treasury man puts it, "There'd be a lot of political difficulties if the week after you sold something, everyone was made redundant. The government can't make business decisions the way a conglomerate can."

Any move toward privatization requires a measure of cooperation from the nationalized industry's chairmen. Such men ordinarily work under contracts and enjoy some degree of autonomy. Though they are often recruited from the private sector, they can be downright hostile to privatization.

Sealink
Newhaven

Headed across the Channel, *cars drive aboard a Sealink ferry operated by government-owned British Railways. That organization has been selling off nonrail businesses, and Sealink is next.*

PERHAPS the most surprising aspect of privatization, then, is that it has moved forward at all. "It's sort of like a horoscope," says a government official. "All the stars and planets have to be in the right place." What sometimes nudges the heavenly bodies into line are forces emanating from the Treasury. While not directly responsible for nationalized industries, the Treasury holds sway over them as a kind of financial policeman. With a couple of exceptions, each industry negotiates its capital budget and working capital needs with the government and estimates the gap, if any, between those requirements and internal cash flow for the year ahead. By committing themselves each year to the amount of that gap, which is called the external financing limit, the industry chairmen put on a financial straitjacket that few private sector executives have to tolerate. If cash flow turns out to be less than expected—as a result of a strike, for in-

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Pumping oil *is one of the numerous state activities Thatcherites want to off-load. A half-interest in this oil field in Dorset belongs to British Gas, which is in oil production and appliance retailing as well as natural gas.*

ROLLS
RR
ROYCE
British

A proud emblem *proclaims that this British Airways Boeing 747 at London's Heathrow Airport has Rolls-Royce engines. The Thatcher government wants to sell British Airways, Rolls-Royce, and possibly the airport as well.*

stance—an industry can't increase its borrowing without the ultimate approval of the Treasury. If an unforeseen investment opportunity presents itself, the industry can't spend in excess of its external financing limit without permission.

The Treasury takes a miserly interest in the nationalized industries' external financing requirements because in recent years they have accounted for 20% to 30% of Britain's budget deficit. The miserliness has advanced the cause of privatization. According to some observers, Sir Peter Parker, the recently retired chairman of British Railways, had long considered disposing of various nonrail operations such as hotels, but moved in a hurry when the Treasury reduced his access to outside money. Observes a Transport Department official: "It's a rather blunt instrument, the external financing limit. But that's one of its great merits."

Financial pressures can drive a recalcitrant nationalized industry to accept Adam Smith's invisible hand as the only feasible alternative to the Treasury's tight fist. A notable example is Britoil. The Thatcherites came to office with high hopes of selling off the state's North Sea oil business, but the managers of Britoil's predecessor company, British National Oil Corporation, strongly resisted the idea. As a profitable, cash-generating operation, BNOC was afflicted with a negative external financing limit; that is, the Treasury took money out of the company instead of putting money in. Strapped for funds to finance a costly exploration and development program, BNOC found that the only way to pursue its expansion plans was to get out of the public sector. With the cooperation of a new Thatcher-appointed chairman, the government sold off 51% of Britoil's shares last fall for some $820 million in the biggest privatization to date.

A privatization venture slated for next fall will dwarf the government's earlier moves—the public sale of 51% of British Telecom, the telecommunications giant. City analysts expect the shares to bring some $6 billion. The decision to sell follows recent efforts to deregulate the industry. Under legislation passed in 1981, the government separated British Telecom from the Post Office, opened the telephone network to increased use by outside communications companies, and removed Telecom's monopoly privileges in marketing and maintaining customer equipment.

The government also granted a start-up venture, Mercury Communications, a license to provide competing phone service—data transmission as well as voice. Mercury has begun providing microwave telephone service to business customers in London. Legislation expected to become law next spring calls for a private British Telecom operating under the supervision of a new authority, the Office of Telecommunications. Among its many duties, Oftel, as it's known, will promote competition—among Telecom, Mercury, and cellular-radio and cable-TV outfits—and represent the interests of consumers in the pricing and quality of phone service.

Another big outfit in for some privatizing is British Gas, much to the distress of its chairman, Sir Denis Rooke. Sir Denis presides over a vast and flourishing business that owes much of its success to its ability to sell natural gas at bargain rates compared with oil and electricity. Much of the gas supply comes from North Sea producers under long-term contracts that established British Gas as monopoly buyer and effective price-setter. Along with selling gas to households and businesses, British Gas engages in oil and gas exploration and production, and it retails gas appliances through some 900 showrooms. Sir Denis strongly favors maintaining British Gas as a single, integrated business; the Thatcherites see plenty of scope for breaking it up.

UNDER AN ACT passed last year, British Gas lost its status as monopoly buyer of North Sea gas and its transmission network was converted into a common carrier. Big industrial gas customers are now free to negotiate supply contracts directly with producers. Over Sir Denis's objections, the Thatcherites are also trying to get British Gas out of the oil business. The company appears close to selling its half interest in a major onshore field to a consortium of small British oil companies for a reported $240 million. British Gas's remaining oil interests consist of stakes in several North Sea oil fields and exploration licenses. The Energy Department is debating whether to sell those assets off piecemeal or vest them in a new company whose shares could be sold on the stock market. Without taking account of any liabilities the new company might carry, the London securities firm de Zoete & Bevan values its assets at over $800 million.

The remaining big share offering expected from the Thatcher government in the near future is British Airways. With perverse timing, the government first announced its plan to sell shares in 1979, just before the airline went into a recessionary tailspin that has left it with a negative net worth of $330 million. Under new management, British Airways has reduced its fleet, cut its staff to 37,000 from over 55,000, and begun to show a profit. Says Chief Executive Colin Marshall: "By September or October of next year we will be delivering a sufficient stream of profits to be able to support privatization." To sell it off any time soon, the government will have to restructure the balance sheet with a shot of capital. Alternatively, the government could wait for the company to build up retained

BEST AVAILABLE COPY

ORGANIZATION	What it does	Revenues millions	Net income millions	Assets millions	What government wants to do
ELECTRICITY COUNCIL	Supplies electric power in England and Wales	$15,353	$554	$53,834	"Attract private capital" into the industry
BRITISH TELECOM	Virtual monopoly on telecommunications	$10,657	$610	$16,251	Sell 51% to private sector
BRITISH GAS	Distributes natural gas	$9,957	$315	$20,137	"Attract private capital" into the industry, sell company's oil interests
BRITISH STEEL	Largest steel producer in U.K.	$5,399	($1,452)	$5,170	Transfer "substantial parts" to private sector
BL	Manufactures automobiles, trucks, buses	$5,374	($512)	$3,730	Transfer "substantial parts" to private sector
BRITISH RAILWAYS	Operates national rail network	$4,927	($304)	$3,142	Sell Sealink shipping subsidiary
BRITISH AIRWAYS	Major international airline	$4,172	$129	$2,232	Transfer to private sector
ROLLS-ROYCE	Manufactures engines (not automobiles)	$2,612	($234)	$2,008	Transfer to private sector
BRITISH SHIPBUILDERS	Builds and repairs ships, manufactures marine engines	$1,826	($214)	$949	Transfer "substantial parts" to private sector
NATIONAL BUS	Operates bus lines	$1,184	$29	$590	Attract "substantial private capital" into company
ROYAL ORDNANCE FACTORIES	Manfactures arms, armored vehicles, ammunition	$750	$147	$487	Permit entry of private capital through joint ventures or equity ownership
BRITISH AIRPORTS AUTHORITY	Owns and operates seven airports	$474	$35	$1,489	Transfer "as many as possible" to private sector

The Thatcher Denationalization Drive Has Lots of Targets

These 12 government-owned organizations are the denationalizers' main targets. The Thatcherites have publicly announced intentions of selling them, selling parts of them, or at least exposing them to competition from the private sector. Notably absent is the National Coal Board, which would rank fourth in revenues if it were on the list. The government has not said anything about privatizing coal, and presumably considers that a hopeless cause. Rolls-Royce manufactures marine and industrial engines as well as aircraft engines, but not Rolls-Royce automobiles—they're made by Vickers, mainly a manufacturer of industrial equipment. The figures in the table are for each organization's most recent fiscal year. They are stated on a historical-cost basis for all except electricity, gas, and airports, which use current-cost accounting.

earnings, but that would probably postpone the sale until long after airline stocks hit their cyclical peak. Says one government veteran: "For Christ's sake, let's privatize it now before something else goes wrong."

WHERE ALL the investors will come from to buy all the equities the government wants to sell is a matter of intense speculation in the City. So far the government has not needed to look to foreign investors to buy shares of privatized companies—the British market was able to absorb the offerings. But now bigger offerings are in prospect. The $6 billion that the British Telecom offer may bring in represents an amount roughly equal to the total volume of money expected to flow into new equities on the London market in all of 1984. Lest the government crowd out other new issues—including its own—it will likely pitch some of British Telecom's shares on overseas markets. As for British Airways, Colin Marshall reports: "We've been getting a tremendous amount of interest from Wall Street. Virtually every one of the big firms has been waltzing around here of late."

On the manufacturing side of the public sector, though, privatization holds little promise of large asset sales any time soon. Says Norman Lamont, who as minister of state in the Department of Trade and Industry oversees many of the public sector's biggest losers: "Most of these companies are in a controlled receivership." The only one the Thatcherites are committed to privatizing in its entirety is the engine builder Rolls-Royce, which could remain in the red for a few more years before its aircraft engine business picks up. "We hope to privatize it in the life of this Parliament," Lamont says.

In other state-owned industrial companies, the government is looking for salable pieces. "There's no part of British Steel I wouldn't sell on behalf of the corporation, if I could find the buyers," Lamont says. British Shipbuilders' sole profitable business, the warship division, "can be sold and will be sold," he adds. At the automaker BL, Lamont says, the profitable Land Rover and replacement parts businesses will go, along with the newly revitalized Jaguar operation.

Those sales would leave a rump of unprofitable industries—motor vehicles, ships, coal, steel—serving competitive markets from within the public sector. To privatize them further might amount to scrapping them. As Lamont says, "You don't simply bankrupt state industries employing masses of people." On that daunting point, the views of Thatcherites and Laborites converge.

■ The Thatcher government's valiant efforts to transfer nationalized enterprises to the private sector have already succeeded better than anyone would have been likely to predict a few years ago. To some extent, it seems, you *can* turn the clock back after all. But the most impressive lesson of the privatization adventure is how nearly impossible it is to unload bulky, unprofitable industries once they have been nationalized. Yet nations still succumb to nationalization fever—France and Mexico are among the recent victims. Governments tempted to nationalize would do well to note that the British government seems doomed to go on unprofitably mining coal, producing steel, manufacturing cars, and building ships, even under Margaret Thatcher. ■

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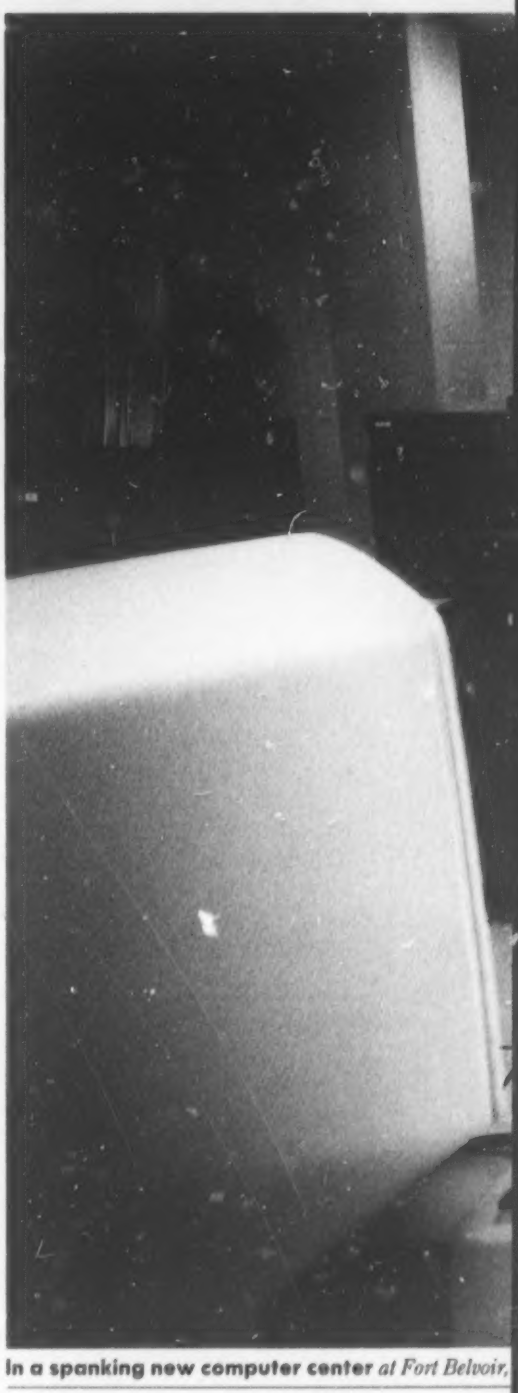
COMPANIES/PETER NULTY

ROSS PEROT'S RAID ON WASHINGTON

■ For years Electronic Data Systems Inc., the computer services company founded in Dallas by H. Ross Perot, avoided doing business in Washington. Too much bureaucratic waffling and too little profit, thought Perot. But the billionaire and sometime rescuer of failed brokerage houses and Iranian hostages has changed his mind. He is now banking on federal contracts to make his company the industry leader.



In a spanking new computer center *at Fort Belvoir,*

Washington is embarked on a massive procurement binge to install new computer systems or modernize obsolete ones in the armed forces, the Postal Service, the Social Security Administration, and other government agencies. The largest projects, called mega-contracts, could each provide victorious bidders with revenues of more than a billion dollars over the life of the contracts, usually five years or more.

IF PEROT CAN CAPTURE a chunk of the federal market, he may soon realize his dream of making EDS the largest and most profitable company in the $20-billion-a-year computer services industry. In the fiscal year that ended June 30, EDS had $652 million in revenues, third behind Automatic Data Processing Corp., with revenues of $753 million, and Computer Sciences Corp., $695 million. EDS earned $58.6 million, second only to Automatic Data Processing's $64.5 million; Computer Sciences earned $17.9 million.

EDS is closing in fast on its competitors. It has added 25% a year to revenues and earnings since 1976. The company, which got its start primarily by processing health insurance claims for Medicaid and Blue Cross/Blue Shield, is expanding rapidly into banks, savings and loan institutions, and credit unions. Since opening a Washington office in 1979, EDS has built up a business in government contracts that brought in $150 million last year. Automatic Data, by contrast, mainly processes payrolls and other information for small to medium-size companies, and the recession has cut its annual growth to just over 11% from a rate during the 1970s of almost 22%. It has yet to bid on any large government contracts. Computer Sciences, which does most of its business with the government, is growing about 10% per year. For EDS, winning four or five mega-contracts could mean the difference between settling for a three-way tie or becoming the dominant power in data services. There's not much doubt in Perot's mind about the outcome. "This," he muses happily, "is the too-good-to-be-true era of EDS."

EDS's run for the No. 1 spot hasn't gone unnoticed in the financial community, where Perot is enjoying something of a renaissance. EDS was popular on Wall Street in the late 1960s; its stock sold for $41 per share (after adjusting for splits) at the old peak in 1970. But Perot's image was tarnished in 1974 by his failed attempt to salvage two large customers, the brokerage houses of du Pont Glore Forgan Inc. and Walston & Co. When they went under, they took $60 million of Perot's personal fortune with them. Soon after, EDS lost several major insurance-processing contracts, earnings leveled off, and the stock fell to $2.75 a share. With EDS on the move again, the stock is back up to around $39 a share, which is 37 times earnings—among the highest multiples in the industry.

Although a relative newcomer to the federal market, EDS has strong and, some might say, unusual qualifications. The mega-contracts on which Perot has set his sights call for connecting far-flung government data

RESEARCH ASSOCIATE *Royce D. Wolfe*

Virginia, a soldier operates a keyboard of Viable, a $656-million computer system EDS is putting together for the Army.

bases and computer terminals into complex networks, a process called systems integration, which is an EDS specialty. Moreover, Perot has always been a demon for results. His technique, says Mort Meyerson, EDS's president, is "to focus on a goal and pursue it beyond human endurance."

His goals are rarely modest. In 1979 Perot sent a team of EDS executives, headed by a hastily recruited former Army commando named Arthur "Bull" Simons, into Iran during the Khomeini revolution to free two EDS executives who had been imprisoned without charge. The team succeeded when Simons's lieutenant, an Iranian employee, incited a mob to storm a prison as if it were the Bastille, freeing 13,000 prisoners, EDS men included. "It was the largest jailbreak in history," boasts Perot. Later Perot invited thriller writer Ken Follett to write an official account of the mission, entitled *On Wings of Eagles*. The tale, which came out in September, quickly became as common as button-down collars in EDS's staid headquarters, and now it's on the best-seller list.

Perot, 53, looks to his employees—troops might be a better word—to share his sense of dedication. About 20% of EDS trainees' time is spent being indoctrinated in a corporate culture with overtones of paramilitary discipline. Conservative dress is required, tassels on shoes and beards on chins are forbidden. In a code of ethics which they sign,

PHOTOGRAPH BY ALEX WEBB—MAGNUM

DENNIS DARLING

Campaigning for federal business, *EDS President Mort Meyerson (left) and Chairman H. Ross Perot are out to mix patriotism with profit.*

employees promise to conduct themselves "in the center of the field of ethical behavior, not along the sidelines." Use of illegal drugs, drinking on the job, and discussing one's salary with fellow employees are causes for immediate dismissal. So too is the pilfering or unauthorized use of office paraphernalia. A small ashtray in the lobby of the insurance division has this warning taped to its bottom: "If you are caught with this ashtray in your office, you will be automatically terminated." A joke, yes, but a telling one.

WHILE PEROT'S STYLE and exploits have endeared him to the military, EDS was still an underdog when the first government mega-contract came up for bid in 1981. Project Viable, as it is called, is an Army program to replace outmoded IBM mainframe computers doing administrative record-keeping chores on 47 Army bases around the country. The favored bidder was a team headed by Computer Sciences with IBM as a subcontractor. Their plan was simply to replace the old IBMs with newer, more powerful ones. But EDS, with Amdahl as a subcontractor, proposed putting smaller computers on each base and connecting them to five huge regional data-crunching centers, in a network similar to the one EDS uses to process data for its commercial customers.

EDS's system is less costly than Computer Sciences', and the networking plan provides backup for any base whose computers malfunction. So in April 1982, the Army awarded EDS the ten-year contract for $656 million. With probable additions and expansions, the deal could grow to over $1 billion. Last year Viable contributed $43 million to EDS revenues. This year those revenues will grow to $60 million, almost half of EDS's federal business. Now a front-runner in the mega-contract game, EDS is the lone contestant for a project to computerize the naval logistics command, a contract worth roughly $400 million over eight years. (Two other potential bidders, Honeywell and Sperry, chose not to participate because they couldn't meet the contract's schedule.)

When EDS won Viable it broke new ground for the computer services industry. Historically, computer manufacturers such as IBM, Burroughs, Sperry, and Honeywell have been the prime contractors, while programming experts sat in the back seat as subcontractors. Viable was the first major federal data-processing contract with a software and services company as the prime contractor.

Gary Fernandes, 40, EDS's vice president in charge of federal operations, is quick to point out that service companies can pick and choose from the best equipment in the market, while computer manufacturers working as prime contractors favor their own products. A software company may also be able to move faster, and may have an edge in persuading a hardware maker to stretch its own idea of what it can accomplish.

In bidding for Viable, for example, EDS linked together four giant IBM 3080 series mainframes for a demonstration. IBM didn't believe these computers could be joined into a network. Perot spent days in Washington egging his team on in its round-the-clock sessions to prepare the demonstration for Navy brass. As the deadline grew near, Perot and his executives badgered IBM repeatedly for assurances that the machines would be delivered on time. The demonstration went off as planned, and the Navy is expected to announce its decision by the end of the year. Meantime Perot has shifted his attention to winning a new Postal Service project called Prism, a network of point-of-sale terminals to dispense stamps, money orders, and the

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Air Force	Administrative and logistic record-keeping	**$310**
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Justice	Support for investigations (tracking bogus checks, for example) and administrative chores	**$150 to $215**
[illegible]	[illegible]	[illegible]

Uncle Sam's Big Data Deals

The data-processing projects above are the ten largest listed in the five-year plans of the various federal agencies and departments. The wide ranges of possible costs reflect both the unpredictable expenses of software development and the agencies' bargaining positions in the budget process.

like in post offices around the country. Possible cost: $3 billion.

Not everyone thinks doing business with the government is a great idea for EDS. Sandra Kraus, a security analyst with Kidder Peabody & Co., estimates the pretax profit on Viable will be 12% of sales at most. "The EDS average is more like 14%, and that could mean federal projects will be a long-term drag on earnings," she fears. Kraus believes there is greater potential in the financial services market, where EDS is already expanding by 25% to 30% a year. Or, she suggests, EDS might earn more pursuing the industrial giants of the FORTUNE 500 than chasing after huge government agencies.

MEYERSON ADMITS that government contracts could thin EDS's margins somewhat. But he argues that they also promise steadier earnings since they will keep the company busy during cyclical downturns in other markets. Moreover, he claims, profit margins are not an accurate gauge of earnings. A good chunk of EDS's federal business so far has come from cost-plus contracts, in which the government typically pays for most of the new facilities required. While the return on sales might be lower, the return on assets is almost as good and in some cases better than it is on commercial deals. Meyerson won't reveal what those returns have been, but EDS's average return on assets is 16% (and its return on shareholders' equity is 25.3%).

Profit margins are apt to become more important as the government moves away from cost-plus contracts in favor of more long-term, fixed-price deals like Viable. Washington has finally come to realize that because cost-plus contracts provide the contractor with no incentive to keep costs down, they cost too much.

But Meyerson has an answer for that too. Under fixed-price contracts, the supplier who can take advantage of the experience curve will steadily increase profit margins over the life of the contract. And EDS has compiled an exemplary record of boosting productivity. Since he took over the day-to-day operations from Perot in 1979, Meyerson, 45, has raised pretax profits from 11% to 14% of sales through a combination of picking lucrative market niches and increasing the output of EDS's technical staff. By Meyerson's reckoning, those people are 103% more productive now than in 1979. Meyerson accomplished this feat primarily by providing the staff with more computer power for designing and programming. He also gave them individual terminals and more privacy—programmers and engineers now work in partitioned cubicles instead of an open bullpen.

Meyerson spares no expense in hiring the kind of people who can become more pro-

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ductive. Last year the company trained about 700 new recruits at a cost of $40,000 each (trainees are required to pledge that they will pay back the costs if they leave the company within three years of completing their courses.) According to Stephen McClellan, a security analyst with Salomon Brothers, the company pays about 25% more than the average market salary.

THE GOVERNMENT should also benefit from the contractors' higher productivity when contracts come up for renewal—assuming bureaucrats get the point. One of EDS's earliest federal jobs was a contract to process national flood insurance claims administered by the Federal Emergency Management Agency. This spring, after 4½ years of EDS management, the contract was reopened for bidding, a normal procedure that didn't reflect on EDS's performance. EDS figured it could lower its previous fee 15% by substituting better programs and more computing power for 94 EDS personnel. But FEMA awarded the contract to EDS's competitor Computer Sciences because, says a FEMA official incredulously, "We could not believe EDS could do it with so few people. We just didn't believe it." His skepticism could cost taxpayers more than $5 million a year. Computer Sciences' bid was $22 million, EDS's $16.7 million.

Sitting in a large rocker in his office surrounded by mementos (including Bull Simons's pistol, which he is having mounted in Lucite), Perot was asked recently why he wants to try his luck in Washington. He replied, "We can do a great service to our country there." Coming from another man, that might be mere grandiloquence. But Perot has a habit of casting himself in the role of cavalry officer riding out to save the wagons. In 1969 he spent $2 million to fly Christmas presents to POWs in North Vietnam. (The Vietnamese denied permission to land.) Then came his Wall Street misadventure, followed by his Iranian success. In his private life, Perot is serving on committees in his home state of Texas to stem the flow of illegal drugs and upgrade public education. Felix Rohatyn, senior partner in Lazard Frères and a new member of the EDS board, says: "Ross has an extraordinary instinct to go out and rescue things. He is also a shrewd businessman, but I think his instinct to rescue is greater."

■ The government's move to fixed-price contracts should benefit taxpayers by gaining better service at lower cost. It could also turn EDS into the biggest of the computer service companies—maybe the IBM of the business. ■

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